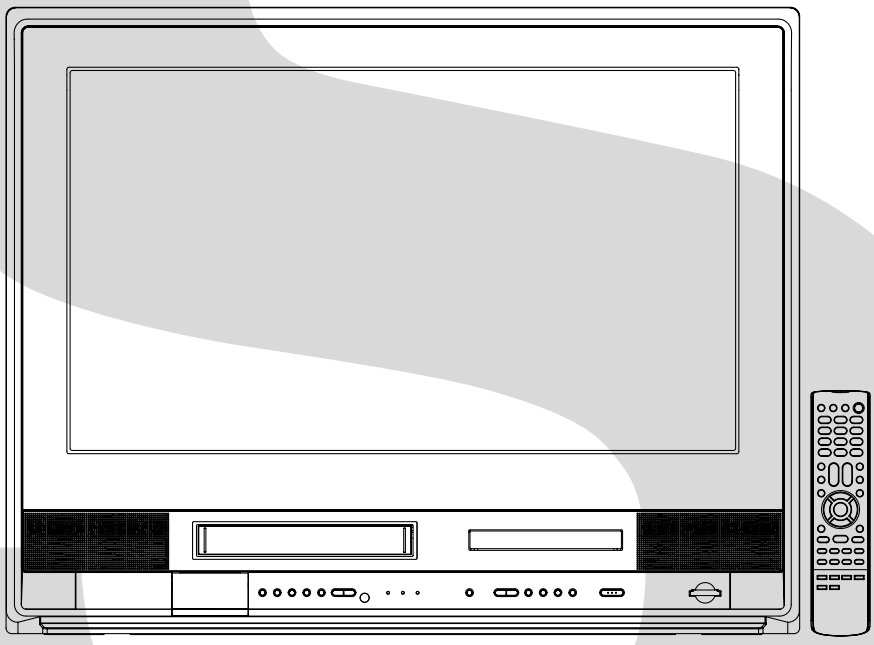
TOSHIBA

FILE NO. 140-200519
(MFR'S VERSION A)

SERVICE MANUAL

COLOR TELEVISION/ VIDEO CASSETTE RECORDER/ DVD VIDEO PLAYER

MW30G71



DOCUMENT CREATED IN JAPAN, July, 2005

CAUTION

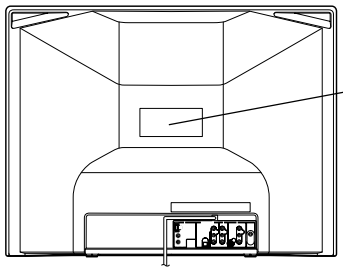
THIS DIGITAL VIDEO PLAYER EMPLOYS A LASER SYSTEM.

TO ENSURE PROPER USE OF THIS PRODUCT, PLEASE READ THIS SERVICE MANUAL CAREFULLY AND RETAIN FOR FUTURE REFERENCE. SHOULD THE UNIT REQUIRE MAINTENANCE, CONTACT AN AUTHORIZED SERVICE LOCATION-SEE SERVICE PROCEDURE.

USE OF CONTROLS, ADJUSTMENTS OR THE PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.

TO PREVENT DIRECT EXPOSURE TO LASER BEAM, DO NOT TRY TO OPEN THE ENCLOSURE. VISIBLE LASER RADIATION MAY BE PRESENT WHEN THE ENCLOSURE IS OPENED. DO NOT STARE INTO BEAM.

Location of the required Marking
The rating sheet and the safety caution are on the rear of the unit.



CERTIFICATION: COMPLIES WITH FDA RADIATION PERFORMANCE STANDARDS, 21 CFR SUBCHAPTER J.

PREPARATION OF SERVICING

The laser diode used for a pickup head may be destroyed with external static electricity.
Moreover, even if it is operating normally after repair, when static electricity discharge is received at the time of repair, the life of the product may be shortened.
Please perform the following measure against static electricity, be careful of destruction of a laser diode at the time of repair.

- Place the unit on a workstation equipped to protect against static electricity, such as conductive mat.
- Soldering iron with ground wire or ceramic type is used.
- A worker needs to use a ground conductive wrist strap for body.

SERVICING NOTICES ON CHECKING

1. KEEP THE NOTICES

As for the places which need special attentions, they are indicated with the labels or seals on the cabinet, chassis and parts. Make sure to keep the indications and notices in the operation manual.

2. AVOID AN ELECTRIC SHOCK

There is a high voltage part inside. Avoid an electric shock while the electric current is flowing.

3. USE THE DESIGNATED PARTS

The parts in this equipment have the specific characters of incombustibility and withstand voltage for safety. Therefore, the part which is replaced should be used the part which has the same character.
Especially as to the important parts for safety which is indicated in the circuit diagram or the table of parts as a ⚠ mark, the designated parts must be used.

4. PUT PARTS AND WIRES IN THE ORIGINAL POSITION AFTER ASSEMBLING OR WIRING

There are parts which use the insulation material such as a tube or tape for safety, or which are assembled in the condition that these do not contact with the printed board. The inside wiring is designed not to get closer to the pyrogenic parts and high voltage parts. Therefore, put these parts in the original positions.

5. TAKE CARE TO DEAL WITH THE CATHODE-RAY TUBE

In the condition that an explosion-proof cathode-ray tube is set in this equipment, safety is secured against implosion. However, when removing it or serving from backward, it is dangerous to give a shock. Take enough care to deal with it.

6. AVOID AN X-RAY

Safety is secured against an X-ray by considering about the cathode-ray tube and the high voltage peripheral circuit, etc.
Therefore, when repairing the high voltage peripheral circuit, use the designated parts and make sure not modify the circuit.
Repairing except indicates causes rising of high voltage, and it emits an X-ray from the cathode-ray tube.

7. PERFORM A SAFETY CHECK AFTER SERVICING

Confirm that the screws, parts and wiring which were removed in order to service are put in the original positions, or whether there are the portions which are deteriorated around the serviced places serviced or not. Check the insulation between the antenna terminal or external metal and the AC cord plug blades. And be sure the safety of that.

(INSULATION CHECK PROCEDURE)

1. Unplug the plug from the AC outlet.
2. Remove the antenna terminal on TV and turn on the TV.
3. Insulation resistance between the cord plug terminals and the eternal exposure metal **[Note 2]** should be more than 1M ohm by using the 500V insulation resistance meter **[Note 1]**.
4. If the insulation resistance is less than 1M ohm, the inspection repair should be required.

[Note 1]

If you have not the 500V insulation resistance meter, use a Tester.

[Note 2]

External exposure metal: Antenna terminal

HOW TO ORDER PARTS

Please include the following informations when you order parts. (Particularly the VERSION LETTER.)

1. MODEL NUMBER and VERSION LETTER
   The MODEL NUMBER can be found on the back of each product and the VERSION LETTER can be found at the end of the SERIAL NUMBER.
2. PART NO. and DESCRIPTION
   You can find it in your SERVICE MANUAL.

IMPORTANT SAFEGUARDS

1. **READ INSTRUCTIONS**
   All the safety and operating instructions should be read before the unit is operated.
2. **RETAIN INSTRUCTIONS**
   The safety and operating instructions should be retained for future reference.
3. **HEED WARNINGS**
   All warnings on the unit and in the operating instructions should be adhered to.
4. **FOLLOW INSTRUCTIONS**
   All operating and use instructions should be followed.
5. **CLEANING**
   Unplug this unit from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
6. **ATTACHMENTS**
   Do not use attachments not recommended by the unit's manufacturer as they may cause hazards.
7. **WATER AND MOISTURE**
   Do not use this unit near water. For example, near a bathtub, washbowl, kitchen sink, or laundry tub, in a wet basement, or near a swimming pool.
8. **ACCESSORIES**
   Do not place this unit on an unstable cart, stand, tripod, bracket, or table. The unit may fall, causing serious injury, and serious damage to the unit. Use only with a cart, stand, tripod, bracket, or table recommended by the manufacturer.

PORTABLE CART WARNING
(symbol provided by RETAC)

S3126A

8A. An appliance and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the appliance and cart combination to overturn.

9. **VENTILATION**
   Slots and openings in the cabinet and in the back or bottom are provided for ventilation, to ensure reliable operation of the unit, and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the unit on a bed, sofa, rug, or other similar surface. This unit should never be placed near or over a radiator or heat source. This unit should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the manufacturer's instructions have been adhered to.
10. **POWER SOURCES**
    This unit should be operated only from the type of power source indicated on the rating plate. If you are not sure of the type of power supply to your home, consult your appliance dealer or local power company. For units intended to operate from battery power, or other sources, refer to the operating instructions.
11. **GROUNDING OR POLARIZATION**
    This unit is equipped with a polarized alternating-current line plug (a plug having one blade wider than the other). This plug will fit into the power outlet only one way. This is a safety feature. If you are unable to insert the plug fully into the outlet, try reversing the plug. If the plug should still fail to fit, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the polarized plug. If your unit is equipped with a 3-wire grounding-type plug, a plug having a third (grounding) pin, this plug will only fit into a grounding-type power outlet. This too, is a safety feature. If you are unable to insert the plug into the outlet, contact your electrician to replace your obsolete outlet. Do not defeat the safety purpose of the grounding-type plug.
12. **POWER-CORD PROTECTION**
    Power-supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the appliance.
13. **LIGHTNING**
    To protect your unit from a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the unit due to lightning and power line surges.
14. **POWER LINES**
    An outside antenna system should not be located in the vicinity of overhead power lines or other electric light or power circuits, or where it can fall into such power lines or circuits. When installing an outside antenna system, extreme care should be taken to keep from touching such power lines or circuits, as contact with them might be fatal.
15. **OVERLOADING**
    Do not overload wall outlets and extension cords, as this can result in a risk of fire or electric shock.
16. **OBJECT AND LIQUID ENTRY**
    Do not push objects through any openings in this unit, as they may touch dangerous voltage points or short out parts that could result in fire or electric shock. Never spill or spray any type of liquid into the unit.

IMPORTANT SAFEGUARDS (CONTINUED)

17. OUTDOOR ANTENNA GROUNDING

If an outside antenna or cable system is connected to the unit, be sure the antenna or cable system is grounded so as to provide some protection against voltage surges and built-up static charges. Section 810 of the National Electrical Code, ANSI/NFPA 70, provides information with respect to proper grounding of the mast and supporting structure, grounding of the lead-in wire to an antenna discharge unit, size of grounding conductors, location of antenna discharge unit, connection to grounding electrodes, and requirements for the grounding electrode.

18. SERVICING

Do not attempt to service this unit yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.

19. DAMAGE REQUIRING SERVICE

Unplug this unit from the wall outlet and refer servicing to qualified service personnel under the following conditions:

a. When the power-supply cord or plug is damaged.
b. If liquid has been spilled, or objects have fallen into the unit.
c. If the unit has been exposed to rain or water.
d. If the unit does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions, as an improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the unit to its normal operation.
e. If the unit has been dropped or the cabinet has been damaged.
f. When the unit exhibits a distinct change in performance, this indicates a need for service.

20. REPLACEMENT PARTS

When replacement parts are required, be sure the service technician uses replacement parts specified by the manufacturer or those that have the same characteristics as the original parts.
Unauthorized substitutions may result in fire, electric shock or other hazards.

21. SAFETY CHECK

Upon completion of any service or repairs to this unit, ask the service technician to perform safety checks to determine that the unit is in proper operating condition.

22. WALL OR CEILING MOUNTING

The product should be mounted to a wall or ceiling only as recommended by the manufacturer.

23. HEAT

The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

24. DISC TRAY

Keep your fingers well clear of the disc tray as it is closing. It may cause serious personal injury.

25. CONNECTING

When you connect the product to other equipment, turn off the power and unplug all of the equipment from the wall outlet. Failure to do so may cause an electric shock and serious personal injury. Read the owner's manual of the other equipment carefully and follow the instructions when making any connections.

26. SOUND VOLUME

Reduce the volume to the minimum level before you turn on the product. Otherwise, sudden high volume sound may cause hearing or speaker damage.

27. SOUND DISTORTION

Do not allow the product output distorted sound for a longtime. It may cause speaker overheating and fire.

28. HEADPHONES

When you use the headphones, keep the volume at a moderate level. If you use the headphones continuously with high volume sound, it may cause hearing damage.

29. LASER BEAM

Do not look into the opening of the disc tray or ventilation opening of the product to see the source of the laser beam. It may cause sight damage.

30. DISC

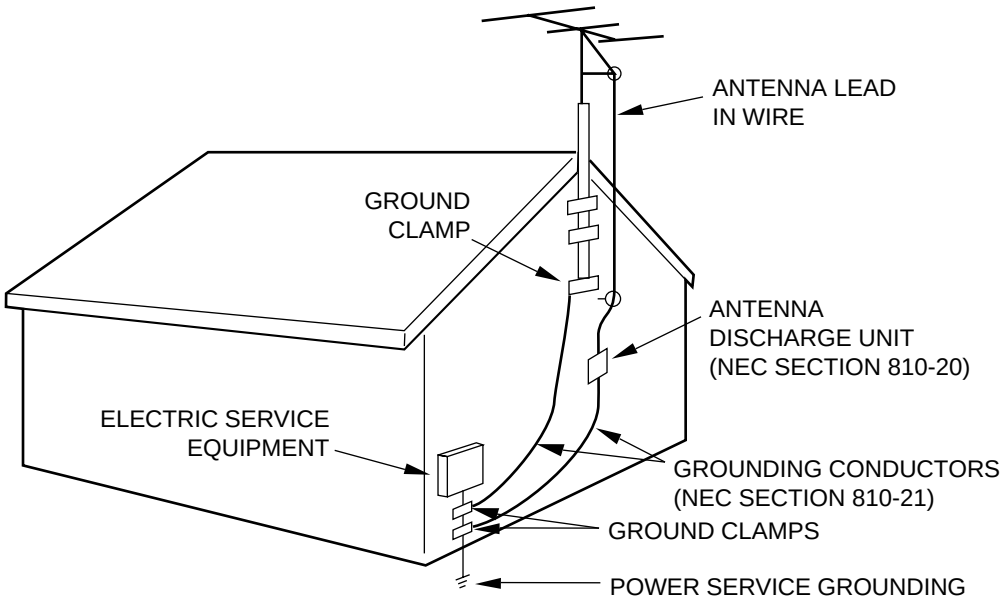
Do not use a cracked, deformed, or repaired disc. These discs are easily broken and may cause serious personal injury and product malfunction.

31. NOTE TO CATV SYSTEM INSTALLER

This reminder is provided to call the CATV system installer’s attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

IMPORTANT SAFEGUARDS (CONTINUED)

EXAMPLE OF ANTENNA GROUNDING AS PER THE NATIONAL ELECTRICAL CODE



WHEN REPLACING DVD DECK

[When removing the DVD Deck]

Before removing Pick Up PCB and DVD PCB connector, short circuit the position shown in **Fig. 1** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.

[When installing the DVD Deck]

Remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD PCB connector.

NOTE

- Before your operation, please read “PREPARATION OF SERVICING”.
- Use the Lead Free solder.
- Manual soldering conditions
  - Soldering temperature: 320 ± 20˚C
  - Soldering time: Within 3 seconds
  - Soldering combination: Sn-3.0Ag-0.5Cu
- When Soldering/Removing of solder, use the draw in equipment over the Pick Up Unit to prevent the Flux smoke from it.

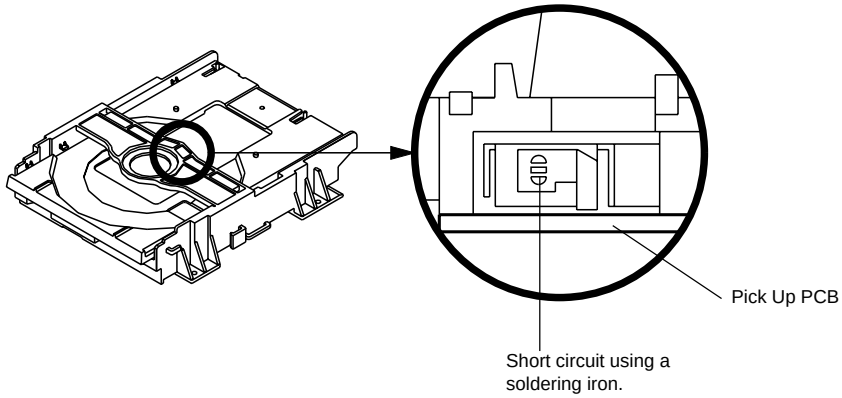


Fig. 1

TAPE REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the TV/DVD/VCR block from the main unit as shown in **Fig. 1** below can be seen. **(Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)**
2. Remove the screw ① of the Deck Chassis and remove the Loading Motor.
3. Rotate the Pinch Roller Cam in the direction of the arrow by hand to slacken the Video Tape. **(Refer to Fig. 2)**
4. Rotate the Clutch Ass'y either direction to wind the Video Tape in the Cassette Case.
5. Repeat steps 3~4. Then take out the Video Cassette from the Deck Chassis. Be careful not to scratch the tape.

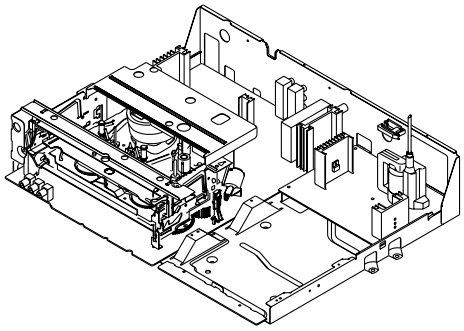


Fig. 1

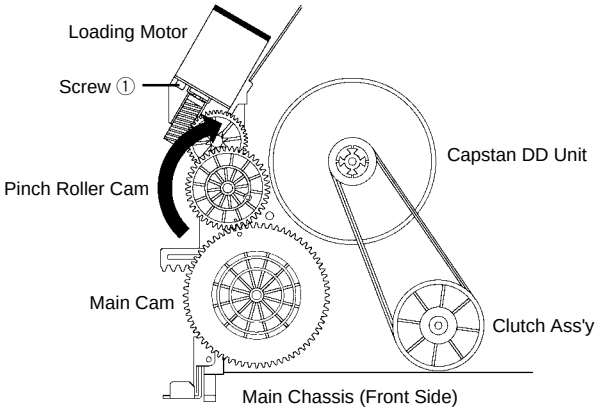


Fig. 2

DISC REMOVAL METHOD AT NO POWER SUPPLY

1. Remove the Back Cabinet and TV/DVD/VCR Block. **(Refer to item 1 of the DISASSEMBLY INSTRUCTIONS.)**
2. Rotate the Main Gear in the direction of the arrow by hand. **(Refer to Fig. 1)**
3. Manually open the Tray.

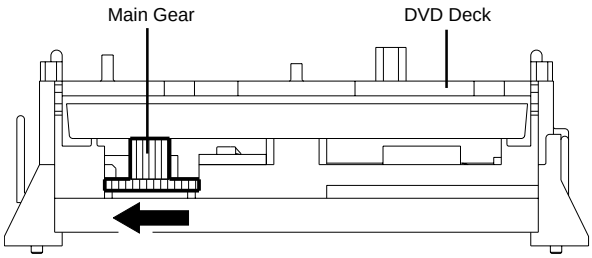


Fig. 1

PARENTAL CONTROL - RATING LEVEL

4 DIGIT PASSWORD CANCELLATION

If the stored 4 digit password in the Rating Level menu needs to be cancelled, please follow the steps below.

1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Check that 'No disc' is displayed on the screen.
4. Press and hold the 'STOP(DVD)' button on the front panel.
5. Simultaneously press and hold the '2' key on the remote control unit.
6. Hold both keys for more than 2 seconds.
7. The On Screen Display message 'PASSWORD CLEAR' will appear.
8. The 4 digit password has now been cleared.

TRAY LOCK

Tray cannot be opened by setting the Tray Lock, please follow the steps below.

1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Press and hold the 'STOP(DVD)' key on the front panel.
4. Simultaneously press and hold the '9' key on the remote control unit.
5. Hold both keys for more than 3 seconds.
6. Press the OPEN/CLOSE key on the front panel to check the Tray Lock setting.

NOTE: No indications on the screen when the Tray Lock is setting.

To unlock the Tray Lock, please follow the steps below.

1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Press and hold the 'STOP(DVD)' key on the front panel.
4. Simultaneously press and hold the '9' key on the remote control unit.
5. Hold both keys for more than 3 seconds.
6. The Tray Lock has now been cleared.

NOTE: No indications on the screen when the Tray Lock is setting.

It is likely to be going to be changed to the following steps without a previous notice in the future.
If the above is not effective measures, please follow the steps below.

Tray cannot be opened by setting the Tray Lock, please follow the steps below.

1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Press it in order of 'SETUP', 'SUBTITLE', '3', 'AUDIO SELECT' and '0' key of a remote control unit.
4. The On Screen Display message ' ⌂ ' will appear.
5. The Tray Lock has now been set up.

NOTE: No indications on the screen when the Tray Lock is setting.

To unlock the Tray Lock, please follow the steps below.

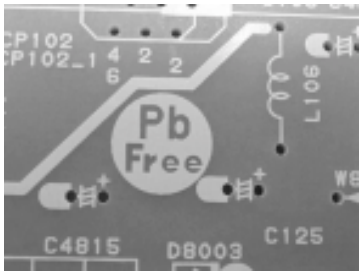
1. Turn Unit ON.
2. Set the DVD to the Stop Mode.
3. Press it in order of 'SETUP', 'SUBTITLE', '3', 'AUDIO SELECT' and '0' key of a remote control unit.
4. The On Screen Display message ' ⌂ ' will appear.
5. The Tray Lock has now been cleared.

NOTE: No indications on the screen when the Tray Lock is setting.

ABOUT LEAD FREE SOLDER (PbF)

Distinction of PbF PCB:

PCBs (manufactured) using lead free solder will have a PbF printing on the PCB.
(Please refer to figures.)



Caution:

- Pb free solder has a higher melting point than standard solder;
  Typically the melting point is 50°F~70°F(30°C~40°C) higher.
  Please use a soldering iron with temperature control and adjust it to 650°F ± 20°F (350°C ± 10°C).
  In case of using high temperature soldering iron, please be carefull not to heat too long.
- Pb free solder will tend to splash when heated too high (about 1100°F/ 600°C).
- All products with the printed circuit board with PbF printing must be serviced with lead free solder.
  When soldering or unsoldering, completely remove all of the solder from the pins or solder area,
  and be sure to heat the soldering points with the lead free solder until it melts sufficiently.

Recommendations

Recommended lead free solder composition is Sn-3.0Ag-0.5Cu.

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GENERAL SPECIFICATIONS

G-1	**TV System**	CRT	CRT Size / Visual Size		30 inch / 760mmV
			CRT Type		Flat (16:9)
			Magnetic Field BV/BH		+ 0.45 G / 0.18 G
		Color System			NTSC
		Display Capability			1080i/540p
		Speaker			2 Speaker
			Position		Front
			Size		2.0 x 4.7 Inch
			Impedance		8 ohm
		Sound Output	MAX		2.5W + 2.5W
			10%(Typical)		--
G-2	**VCR System**	System			VHS Player / Recorder
		Video System			NTSC
		Hi-Fi STEREO			Yes
		NTSC PB			-
		Deck			OVD-7
		Heads	Video Head		4 Heads
			FM Audio Head		2 Heads
			Audio /Control		Mono /Yes
			Erase(Full Track Erase)		Yes
		Tape Speed	Rec PAL		-
			Rec NTSC		SP/SLP (EP)
			Play PAL		-
			Play NTSC		SP/SLP (EP)
		Fast Forward / Rewind Time (Approx.) at 25oC			FF:1'48"/REW:1'48"
				with Cassette	T-120
		Forward/Reverse Picture Search	NTSC or PAL-M		SP/SLP(EP)=3x,5x / 9x,15x
		Frame Advance			Yes
		Slow Speed			1/10
G-3	**DVD System**	Color System			NTSC
		Disc			DVD, CD-DA, CD-R/RW, Video CD DVD-R/RW (Video Format Only)
		Disc Diameter			120 mm , 80 mm
		Drive			DM3PA
		Search speed	Fwd		4 step
				Actual	2-120 times (DVD, VIDEO CD) 4-40 times (CD)
			Rev		4 step
				Actual	2-120 times (DVD, VIDEO CD) 4-40 times (CD)
		Slow speed			Fwd 1/7 - 1/2 times
				Actual	--
					Rev --
				Actual	--
G-4	**Tuning System**	Broadcasting System			US System M
		Tuner and Receive CH	System		1 Tuner
			Destination		US (w/CABLE)
			CH Coverage		2~69, 4A,A-5~A-1, A~I, J~W,W+1~W+84
		Intermediate Frequency	Picture(FP)		45.75MHz
			Sound(FS)		41.25MHz
			FP-FS		4.5MHz
		Preset CH			No
		Stereo/Dual TV Sound			US-Stereo
		Tuner Sound Muting			Yes

GENERAL SPECIFICATIONS

G-5	**Signal**	Video Signal	Input Level		1 V p-p/75 ohm
			Output Level		-
			S/N Ratio (Weighted) at DVD Mode		-
			S/N Ratio (Weighted) at VCR Mode		-
			Horizontal Resolution at DVD Mode		-
			Horizontal Resolution at VCR(SP)Mode		-
		RGB Signal	Output Level		-
		Audio Signal	Input Level		-8.0dBm/50k ohm
		VCR	Output Level(0dB=0.775Vrms)		-
		DVD	Output Level(-20dBFs 0dBFs=2.0Vrms)		-
			Digital Output Level		0.5 V p-p/75 ohm(DVD)
			S/N Ratio at DVD (Weighted)		-
			S/N Ratio at VCR (SP)(CCIR Filter:ON)		-
			Harmonic Distortion at DVD Mode		-
			Harmonic Distortion at VCR(SP) Mode		-
			Frequency Response :		
			DVD Mode	at DVD	-
				at Video CD	-
				at SVCD	-
				at CD	-
			VCR Mode	at SP	-
				at LP	-
				at SLP	-
		Hi-Fi Audio Signal	Dynamic Range : More than		90 dB
			Frequency Response :		20Hz - 20kHz
			Wow And Flutter : Less than		0.01 %Wrms
			Channel Separation : More than		60 dB
			Harmonic Distortion : Less than		1.0 %
G-6	**Power**	Power Source	AC		120V,60Hz
			DC		-
		Power Consumption		at AC	195 W at 120 V 60 Hz
				at DC	-
			Stand by (at AC)		4.0 W at 120 V 60 Hz
			Per Year		-
		Protector	Power Fuse		Yes
			Safety Circuit		Yes
			IC Protector(Micro Fuse)		Yes
			Dew Sensor		No
G-7	**Regulation**		Safety		UL
			Radiation		FCC
			X-Radiation		DHHS
			Laser		DHHS
G-8	**Temperature**		Operation		+5oC ~ +40oC
			Storage		-20oC ~ +60oC
G-9	**Operating Humidity**				Less than 80% RH

GENERAL SPECIFICATIONS

G-10	On Screen Display (TV/VCR)	Menu			Yes
		Menu	Type		Icon
		Picture			Yes
			Mode		Yes
			Brightness		Yes
			Contrast		Yes
			Color		Yes
			Tint		Yes
			Sharpness		Yes
			CableClear		Yes
			Color Temperature		Yes
			Display Format		Yes
			SVM		Yes
			Reset		Yes
		Audio			Yes
			SAP		Yes
			Bass		Yes
			Treble		Yes
			Balance		Yes
			Stable Sound		Yes
			Surround		Yes
			HDMI		Yes
			Reset		Yes
		TV Setup			Yes
			Language		Yes
			Clock Set		Yes
			Auto Clock		Yes
			Standard Time		Yes
			Daylight Saving Time		Yes
			TV/CABLE		Yes
			CH Program		Yes
			ADD/Erase		Yes
			Picture Size		Yes
			Picture Scroll		Yes
			Cinema Mode		Yes
			Aspect		Yes
		Option			Yes
			Timer (ON/OFF Timer)		Yes
			Favorite CH		Yes
			CH Label		Yes
			Video Label		Yes
		Locks			Yes
			V-CHIP Set		Yes
			Lock(CH Lock, Video Lock, Game Timer)		Yes
			Front Panel Lock		Yes
			New Password		Yes
		VCR Setup			Yes
			Timer REC Set		Yes
			Repeat		Yes
		G-CODE(or SHOWVIEW or PLUSCODE)No. Entry			No
		Clock / Date			Yes
		TV/VCR			Yes
		DVD			Yes
		CH/AV(LINE)			Yes
		Tape Counter(Linear Counter)			Yes
		Tape Speed			Yes
		Sleep Time			Yes
		Stereo/Audio Output			Yes
			Bilingual		No
			SAP		Yes
		Control Level	Volume		Yes
			Brightness/Contrast/Sharpness/Color		Yes
			Tint		Yes
			Bass/Treble/Balance		Yes
			Manual Tracking		Yes
			Picture Scroll		Yes
		Play/Stop/FF/Rew/Rec/OTR/T-Rec/Pause/Eject/Tape In (Symbol Mark)			Yes
		Auto Tracking/Manual Tracking			Yes
		Caption / Text			Yes
		Index			No
		Mute			Yes
		Hi-Fi			Yes
		Repeat			Yes
		Zero Return			Yes
		Picture Size			Yes
		DEW			No

GENERAL SPECIFICATIONS

G-11	**On Screen Display (DVD)**	Menu (DVD)			Yes		
			Menu Type		Icon		
			Language		Yes		
				Menu	Yes		
				Subtitle	Yes		
				Audio	Yes		
				OSD Language(Set up Language)			No
			Video		Yes		
				E.B.L. (Enhanced Black Level)			No
				TV Screen Size(4:3/16:9)	Yes		
				OSD Display On/Off	Yes		
				Picture Mode (Video/Film/Auto)	Yes		
				JPEG Interval	Yes		
			Audio		Yes		
				DRC (Dynamic Range Control)	Yes		
				Dialogue (On DRC[TV] / Off DRC[Std])			No
				Surround			No
			System		Yes		
				Disc/Card Slot			No
				Password Lock/ Un Lock	Yes		
				Parental	Yes		
				Select Files	Yes		
				HDMI (480p/1080i/720p)			No
				Output			No
			Open		Yes		
			Close		Yes		
			No Disc/ No Card		Yes		
			Reading Disc/ Reading Card		Yes		
			Play		Yes		
			Still/Pause		Yes		
			Stop		Yes		
			Prohibit Mark		Yes		
			PBC		Yes		
			Step		Yes		
			Skip(>>|)		Yes		
			Skip(|<<)		Yes		
			Random		Yes	(CD, VIDEO CD, MP3, WMA, JPEG)	
			Repeat		Yes		
			Slow+		Yes		
			Slow-				No
			Search+		Yes		
			Search-		Yes		
			Jump		Yes		
			Resume		Yes		
			Title No.		Yes		
			Chapter No.		Yes		
			Track No.		Yes		
			Time		Yes		
			Sub Title No.		Yes		
			Angle No.		Yes		
			Vocal On/Off				No
			Audio No.		Yes		
			Audio Stereo L/R		Yes	(Video CD)	
			Zoom		Yes		
			Marker No.				No
			Program Play Back		Yes	(CD, VIDEO CD, MP3, WMA, JPEG)	
			Surround On/Off				No
			Screen Saver				No
			MP3, WMA, JPEG	Folder Name	Yes		
				File Name	Yes		
				File No	Yes		
				Time	Yes	(MP3, WMA Only)	
				Track No	Yes		
G-12	**OSD Language**				English French Spanish		
G-13	**Clock,Timer and Timer Back-up**	Calendar			1990/1/1 ~ 2081/12/31		
		Timer Events			8 Program/ 1 Month		
		One Touch Recording Max Time			6 Hours		
		Sleep Timer	Max Time		120		Min
			Step		10		Min
		On/Off Timer	Program(On Timer / Off Timer)		1		Program
		Auto Shut Off	No Signal		15		Min
			No Operation		-		Min
		Timer Back-up (at Power Off Mode)			5		Sec

GENERAL SPECIFICATIONS

G-14	**Remote Control Unit**	Unit		RC-KH
		Glow in Dark Remocon		Yes
		Remocon Format		TOSHIBA
		Format		TOSHIBA
		Custom Code		40-BFh,44-BBh,45-BAh
		Power Source	Voltage(D.C)	3V
			UM size x pcs	UM-4 x 2 pcs
		Total Keys		50
		Keys	TV/VCR	Yes
			DVD	Yes
			Power	Yes
			1	Yes
			2	Yes
			3	Yes
			4	Yes
			5	Yes
			6	Yes
			7	Yes
			8	Yes
			9	Yes
			0	Yes
			Channel-	Yes
			Channel+	Yes
			Volume-	Yes
			Volume+	Yes
			Display	Yes
			Sleep	Yes
			Audio Select	Yes
			Mute	Yes
			Channel Return / Skip-	Yes
			Closed Caption / Skip+	Yes
			T-REC	Yes
			Rec/OTR	Yes
			Slow+	Yes
			Play	Yes
			Stop	Yes
			Rew	Yes
			F. Fwd	Yes
			Pause / Still / Step	Yes
			CM Skip / Jump	Yes
			SP/SLP / Return	Yes
			Counter Reset / Angle	Yes
			Zero Return / Subtitle	Yes
			Input Select / Zoom	Yes
			Menu /Setup	Yes
			Program / Repeat A-B / DVD/Card	Yes
			D.Tracking / Top Menu	Yes
			Tracking+ / DVD Menu	Yes
			Tracking- / Play Mode	Yes
			Cancel	Yes
			Cursor Up	Yes
			Cursor Down	Yes
			Cursor Left/Favorite CH-	Yes
			Cursor Right/Favorite CH+	Yes
			Enter	Yes
			Picture Size	Yes
			Open/Close	Yes
			Eject	Yes

GENERAL SPECIFICATIONS

G-15	Features (TV/VCR)	Auto Head Cleaning		Yes	
		VIDEO PLUS+(SHOWVIEW,G-CODE)			No
		Auto Clock		Yes	
		Auto Setup		Yes	
		Forward / Reverse Picture Search		Yes	
		CH Program (Auto CH Memory)		Yes	
		Surround		Yes	
		Stable Sound		Yes	
		Closed Caption		Yes	
		TV Auto Shut off Function		Yes	
		End Call			No
		Index Search			No
		SQPB			No
		CABLE		Yes	
		CM Skip(30sec x 6 Times)		Yes	
		Comb Filter (3D)		Yes	
		Mode (Picture Preference)		Yes	
		Color Temperature		Yes	
		SVM Circuit		Yes	
		CableClear		Yes	
		SAP		Yes	
		Picture Size		Yes	
		Picture Scroll		Yes	
		Cinema Mode		Yes	
		Aspect		Yes	
		ON/OFF Timer		Yes	
		Favorite CH		Yes	
		CH Label		Yes	
		Video Label		Yes	
		CH Lock		Yes	
		Video Lock		Yes	
		Game Timer		Yes	
		Front Panel Lock		Yes	
		Available Scan Rates (Component/HDMI)		480i/480p/720p/1080i	
		TV Monitor			No
		Program Extend			No
		Choke Coil			No
		Energy Star			No
		Protect of FBT Leak Circuit		Yes	
		Zero Return		Yes	
		Power On Memory			No
		V-chip	USA V-chip	Yes	
			CANADA V-chip		No
	Features (DVD)	Tray Lock		Yes	
		Auto Stop	(Pause, and Resume Stop after 5min.)	Yes	
		Card Slot Reading (Not secured Data)		Yes	
			xD-Picture Card	Yes	
			Memory Stick	Yes	
			Multi Media Card	Yes	
			SD Memory Card	Yes	
			Compact Flash		No
			Micro Drive		No
			SmartMedia		No
		Video CD Playback		Yes	
		SVCD Playback			No
		MP3 Playback		Yes	
		WMA Playback		Yes	
		JPEG Playback		Yes	
		Digital Out	(Dolby Digital)	Yes	
			(MPEG)	Yes	
			(PCM)	Yes	
			(DTS)	Yes	
		Down Mix Out	(Dolby Digital)	Yes	
			(DTS)		No
		3D Surround			No
		Screen Saver			No
		Audio DAC		192kHz / 24bit	
		Copy (Disc to Tape)		Yes (by Conditioning)	

GENERAL SPECIFICATIONS

G-16	Accessories	Owner's Manual		Language	English
				w/Guarantee Card	Yes
		Remote Control Unit			Yes
		Battery			Yes
				UM size x pcs	UM-4 x 2 pcs
				OEM Brand	No
		Rod Antenna			No
				Poles	-
				Terminal	-
		Loop Antenna			No
				Terminal	-
		U/V Mixer			No
		300 ohm to 75 ohm Antenna Adapter			Yes
		Antenna Change Plug			No
		DC Car Cord (Center+)			No
		AC Plug Adapter			No
		AC Cord			No
		AV Cord (2Pin-1Pin)			No
		Guarantee Card			No
		Registration Card			Yes
		ESP Card			No
		Warning Sheet			No
		Dew/AHC Caution Sheet			No
		Quick Set-up Sheet			No
		Circuit Diagram			No
		Service Facility List			No
		Important Safeguard			No
		Sheet Information (Return)			Yes
		Netflix Card			Yes [Until '05 MAR O/R]
G-17	Interface	Switch	Front	Power (Tact)	Yes
				Channel Up	Yes
				Channel Down	Yes
				Volume Up	Yes
				Volume Down	Yes
				Play (VCR)	Yes
				Stop / Eject (VCR)	Yes
				F.FWD/Cue (VCR)	Yes
				Rew/Rev (VCR)	Yes
				REC/OTR (VCR)	Yes
				Play (DVD)	Yes
				Stop (DVD)	Yes
				Skip+ /Search+ (DVD)	Yes
				Skip- /Search- (DVD)	Yes
				Open/Close (DVD)	Yes
				Input Select	No
				Main Power SW	No
		Indicator		Power	Yes(Red)
				REC/OTR	Yes(Red)
				T-REC	Yes(Red)
				TV/VCR	No
				DVD	No
		Terminals	Front	Video Input	RCA x 1
				Audio Input	RCA x 2(Stereo)
				S Input	Yes
				4 in 1 Card Slot	Yes (xD-Picture Card, Memory Stick, Multi Media Card, SD Memory Card)
				Compact Flash Card Slot	No
				Other Terminal	No
			Rear	Video Input	RCA x 1
				Audio Input	RCA x 2(Stereo)
				S Input	Yes
				Video Output	No
				Audio Output	No
				Component Input(w/ Analog Audio L/R)	RCA x 5
				HDMI Input (w/ Analog Audio L/R)	HDMI x 1(RCA x 2)
				Digital Audio Output	Coaxial (DVD Only), Optical (DVD Only)
				VHF/UHF Antenna Input	F Type
				AC Inlet	No
G-18	Set Size			Approx. W x D x H (mm)	796 x 568 x 602.5
G-19	Weight			Net (Approx.)	53.5kg (117.9lbs)
				Gross (Approx.)	61.0kg (134.5lbs)

GENERAL SPECIFICATIONS

G-20	**Carton**	Master Carton		No
			Content	-
			Material	-
			Dimensions W x D x H(mm)	-
			Description of Origin	-
		Gift Box	Material	Double/White
			Dimensions W x D x H(mm)	916 x 691 x 733
			Description of Origin	Yes
		Drop Test	Natural Dropping At	1 Corner / 2 Edges / 4 Surfaces
			Height (cm)	40(ORION SPEC:25)
		Container Stuffing(40' container)		129 Sets
G-21	**Material**	Cabinet	Front	PS 94V0 DECABROM
			Rear	PS 94V0 NON-DECABROM
		PCB	Non-Halogen Demand	No
			Eyelet Demand	Yes
G-22	**Environment**	Environmental standard requirement (by buyer)		Green procurement of TOSHIBA
			Pb-free	Phase3(Phase3A)

DISASSEMBLY INSTRUCTIONS

1. REMOVAL OF MECHANICAL PARTS AND P.C. BOARDS

1-1: BACK CABINET (Refer to Fig. 1-1)

1. Remove the 8 screws ①.
2. Remove the Back Cabinet in the direction of arrow.

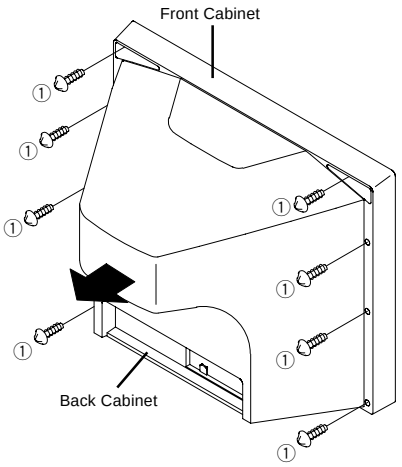


Fig. 1-1

1-2: CRT PCB (Refer to Fig. 1-2)

CAUTION: BEFORE REMOVING THE ANODE CAP, DISCHARGE ELECTRICITY BECAUSE IT CONTAINS HIGH VOLTAGE. BEFORE ATTEMPTING TO REMOVE OR REPAIR ANY PCB, UNPLUG THE POWER CORD FROM THE AC SOURCE.

1. Remove the Anode Cap.
   (Refer to REMOVAL OF ANODE CAP)
2. Disconnect the following connectors:
   (CP801, CP802B, CP803 and CP852).
3. Remove the CRT PCB in the direction of arrow.

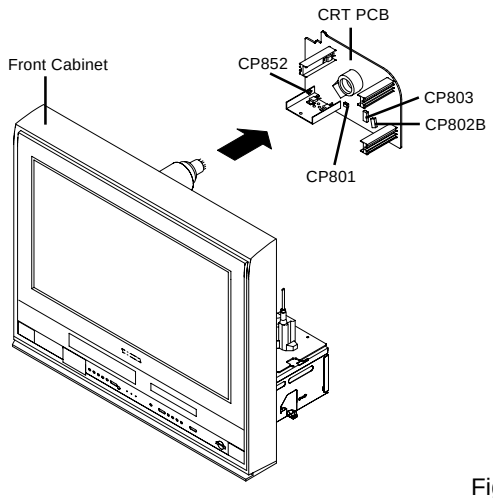


Fig. 1-2

1-3: MEMORY CARD PCB (Refer to Fig. 1-3)

1. Remove the screw ①.
2. Remove the 4 screws ②.
3. Disconnect the following connector: **(CP9604)**.
4. Remove the Memory Card PCB in the direction of arrow.

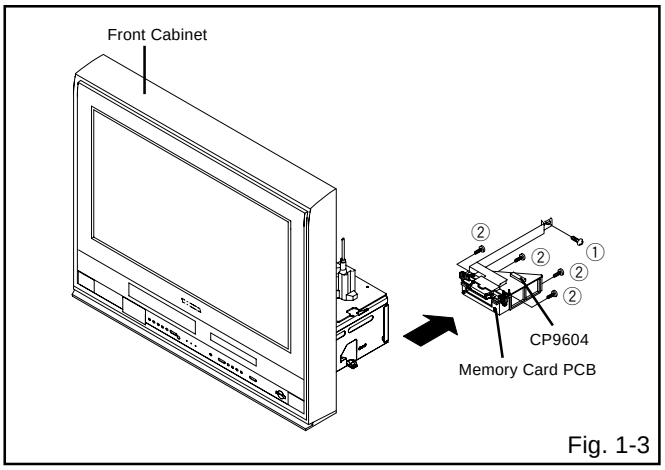


Fig. 1-3

1-4: TV/DVD/VCR BLOCK (Refer to Fig. 1-4)

1. Remove the 2 screws ①.
2. Disconnect the following connectors:
   (CP303, CP404 and CP1702).
3. Remove the TV/DVD/VCR Block in the direction of arrow.

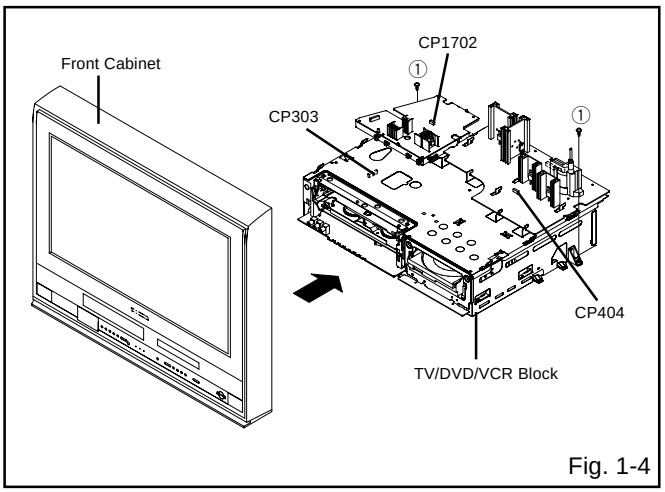


Fig. 1-4

DISASSEMBLY INSTRUCTIONS

1-5: POWER PCB (Refer to Fig. 1-5)

1. Remove the screw ①.
2. Disconnect the following connectors:
   (CP1701 and CP1707).
3. Remove the POWER PCB in the direction of arrow.

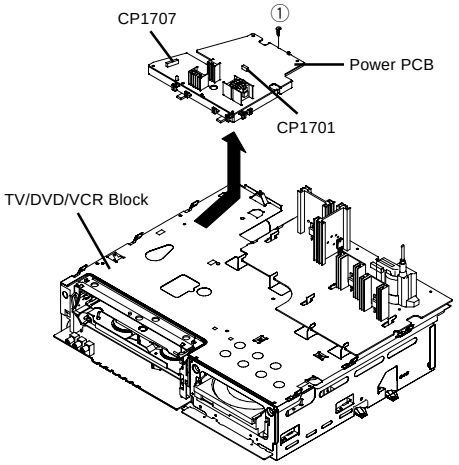


Fig. 1-5

1-6: MAIN PCB (Refer to Fig. 1-6)

1. Remove the 4 screws ①.
2. Remove the 2 screws ②.
3. Disconnect the following connectors: **(CP401)**.
4. Remove the Main PCB in the direction of arrow.

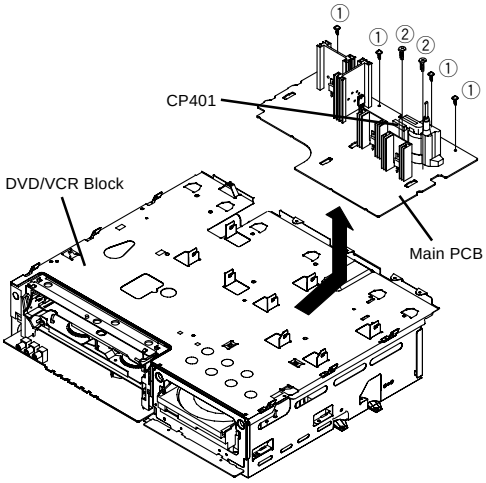


Fig. 1-6

1-7: TOP SHIELD (Refer to Fig. 1-7)

1. Remove the 10 screws ①.
2. Remove the Top Shield in the direction of arrow.

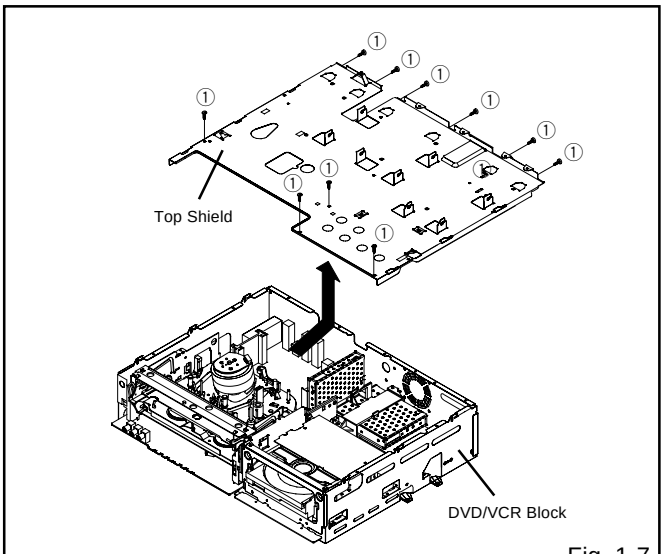


Fig. 1-7

1-8: DVD BLOCK (Refer to Fig. 1-8)

1. Remove the 2 screws ①.
2. Remove the VCR Holder.
3. Remove the 5 screws ②.
4. Disconnect the following connectors:
   (CP2201, CP8001 and CP8002).
5. Remove the DVD Block in the direction of arrow.

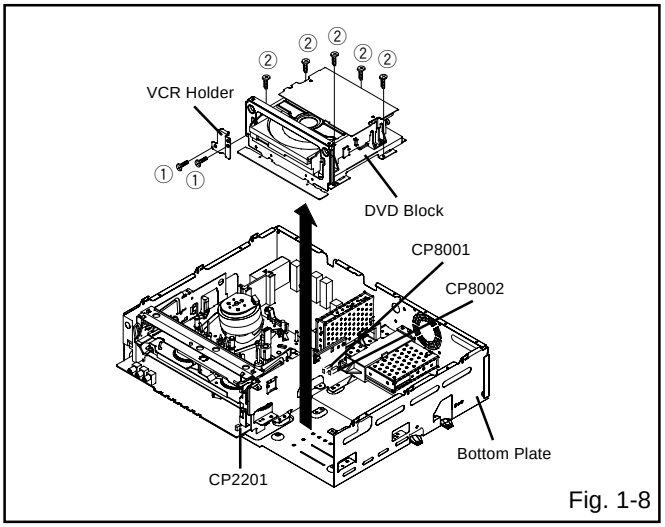


Fig. 1-8

DISASSEMBLY INSTRUCTIONS

1-9: OPERATION PCB/DVD PCB/DVD DECK (Refer to Fig. 1-9)

1. Short circuit the position shown in **Fig. 1-9** using a soldering iron. If you remove the DVD Deck with no soldering, the Laser may be damaged.
2. Remove the 2 screws ①.
3. Remove the Operation PCB in the direction of arrow (A).
4. Remove the 2 screws ②.
5. Remove the Front Shield in the direction of arrow (B).
6. Disconnect the following connectors: **(CP2601, CP2602 and CP2603)**.
7. Remove the 4 screws ③.
8. Remove the DVD Deck in the direction of arrow (C).
9. Remove the 2 screws ④.
10. Remove the DVD PCB in the direction of arrow (D).

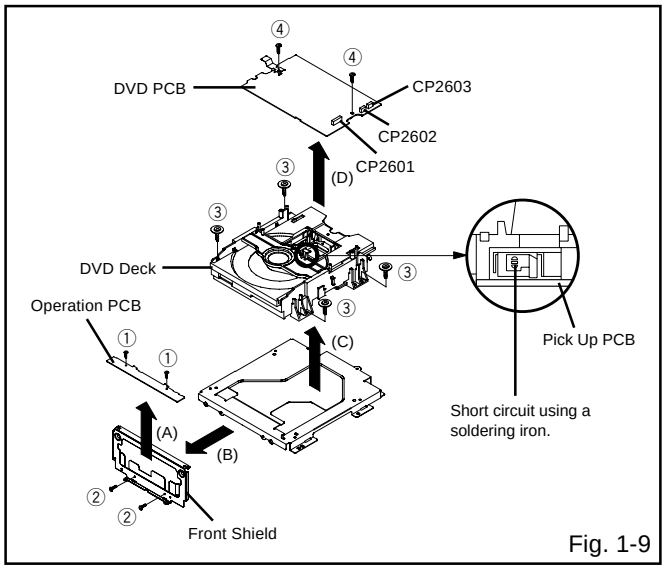


Fig. 1-9

NOTE

1. Before your operation, please read “PREPARATION OF SERVICING”.
2. Use the Lead Free solder.
3. Manual soldering conditions
   - Soldering temperature: 320 ± 20˚C
   - Soldering time: Within 3 seconds
   - Soldering combination: Sn-3.0Ag-0.5Cu
4. When Soldering/Removing of solder, use the drawing equipment over the Pick Up Unit to keep the Flux smoke away from it.
5. When installing the DVD Deck, remove all the soldering on the short circuit position after the connection of Pick Up PCB and DVD PCB connector.

1-10: SCALER PCB (Refer to Fig. 1-10)

1. Remove the 2 screws ①.
2. Disconnect the following connectors: **(CP4202 and CP4203).**
3. Remove the Connector PCB in the direction of arrow (A).
4. Disconnect the following connector: **(CP7201)**.
5. Remove the Scaler PCB in the direction of arrow (B).

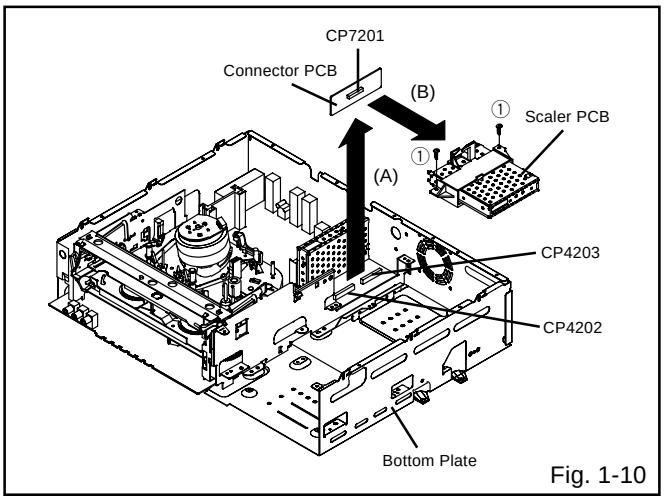


Fig. 1-10

1-11: VCR DECK (Refer to Fig. 1-11)

NOTE

Do not remove the cable at the FE Head section. The FE Head may be damaged if you remove the cable by force.

1. Move the Cassette Holder Ass'y to the back side.
2. Remove the screw ①.
3. Remove the FE Head.
4. Remove the 3 screws ②.
5. Remove the screw ③.
6. Disconnect the following connectors: **(CP3001, CP4501 and CP4502)**.
7. Remove the AC Head Cover and VCR Deck in the direction of arrow.

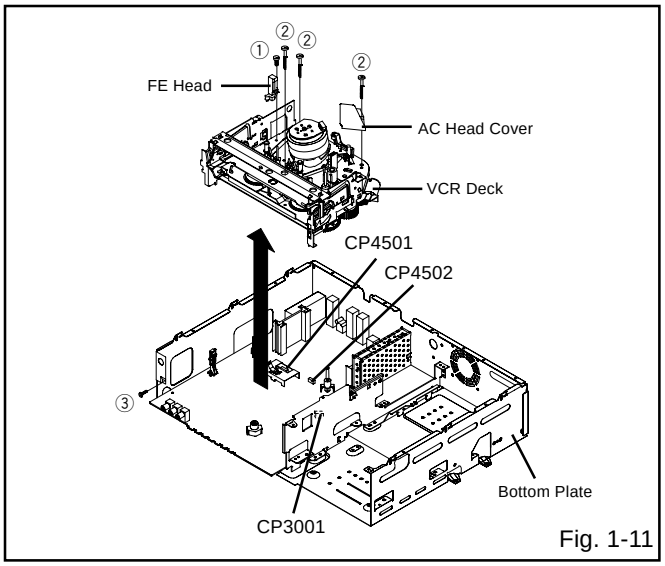


Fig. 1-11

DISASSEMBLY INSTRUCTIONS

1-12: VCR PCB (Refer to Fig. 1-12)

1. Remove the screw ①.
2. Remove the screw ②.
3. Remove the 7 screws ③.
4. Remove the AV Jack Shield.
5. Remove the VCR PCB in the direction of arrow.

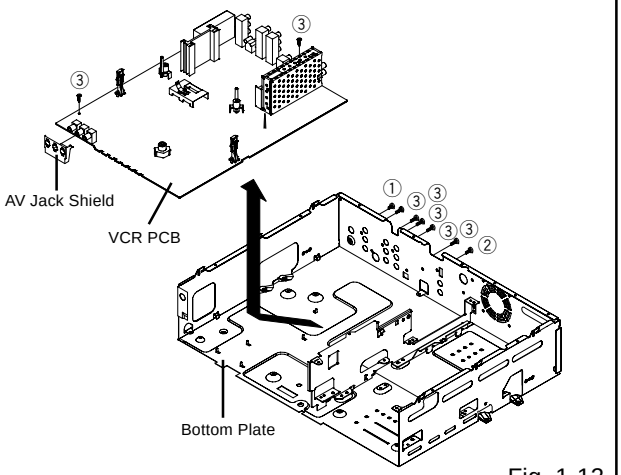


Fig. 1-12

DISASSEMBLY INSTRUCTIONS

2. REMOVAL OF VCR DECK PARTS

2-1: TOP BRACKET (Refer to Fig. 2-1)

1. Extend the 2 supports ①.
2. Slide the 2 supports ② and remove the Top Bracket.

NOTE

1. After the installation of the Top Bracket, bend the support ① so that the Top Bracket is fixed.

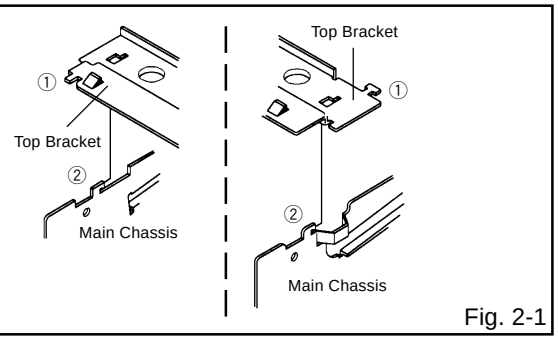


Fig. 2-1

2-2: CASSETTE HOLDER ASS'Y (Refer to Fig. 2-2)

1. Move the Cassette Holder Ass'y to the front side.
2. Push the Locker R to remove the Cassette Side R.
3. Remove the Cassette Side L.

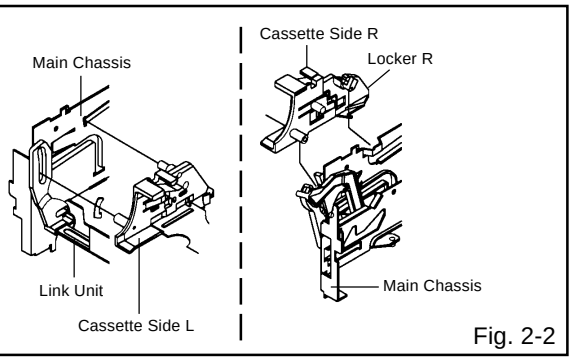


Fig. 2-2

2-3: LINK UNIT (Refer to Fig. 2-3)

1. Set the Link Unit to the Eject position.
2. Unlock the support ①.
3. Remove the (A) side of the Link Unit first, then remove the (B) side.

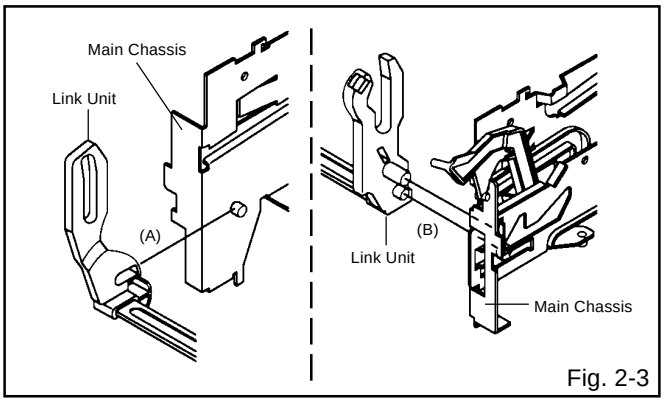


Fig. 2-3

2-4: LINK LEVER/FLAP LEVER/BOT COVER (Refer to Fig. 2-4)

1. Extend the support ①.
2. Remove the Link Lever.
3. Remove the Flap Lever.

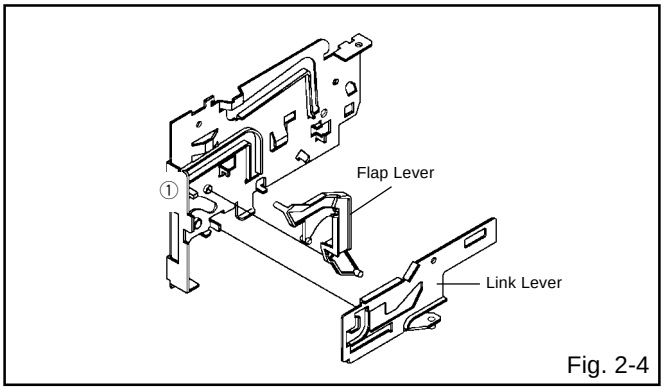


Fig. 2-4

DISASSEMBLY INSTRUCTIONS

2-5: LOADING MOTOR/WORM (Refer to Fig. 2-5-A)

1. Remove the screw ①.
2. Remove the Loading Motor.
3. Remove the Worm.

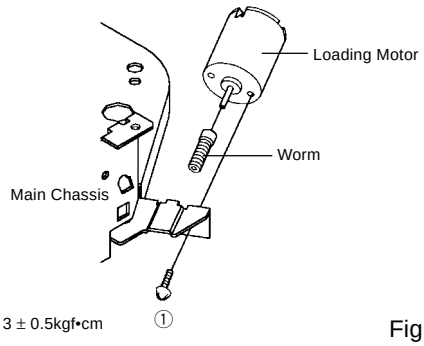


Fig. 2-5-A

NOTE

1. In case of the Worm installation, check if the value of the Fig. 2-5-B is correct.
2. In case of the Loading Motor installation, slacken the wire as shown Fig. 2-5-C.
3. When installing the wires between Capstan DD Unit and Loading Motor, connect them correctly as shown Fig. 2-5-D.

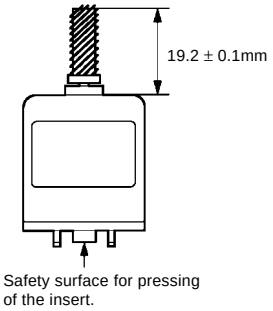


Fig. 2-5-B

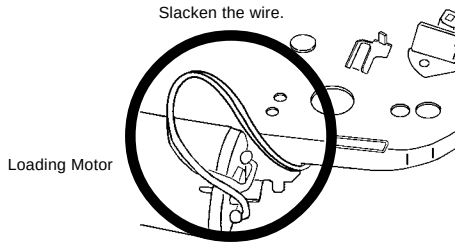


Fig. 2-5-C

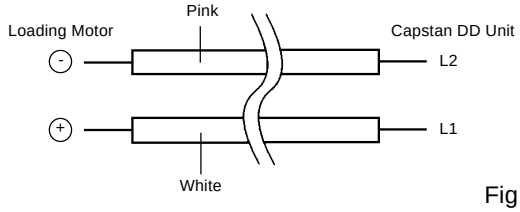


Fig. 2-5-D

2-6: TENSION ASS'Y (Refer to Fig. 2-6-B)

1. Turn the Pinch Roller Cam clockwise so that the Tension Holder hook is set to the position of Fig. 2-6-A to move the Tension Arm Ass'y.
2. Remove the Tension Spring.
3. Unlock the 2 supports ① and remove the Tension Band.
4. Unlock the support ② and remove the Tension Arm Ass'y.
5. Unlock the support ③ and remove the Tension Connect.
6. Float the hook ④ and turn it clockwise then remove the Tension Holder.

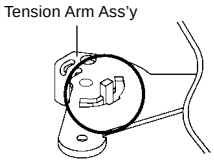


Fig. 2-6-A

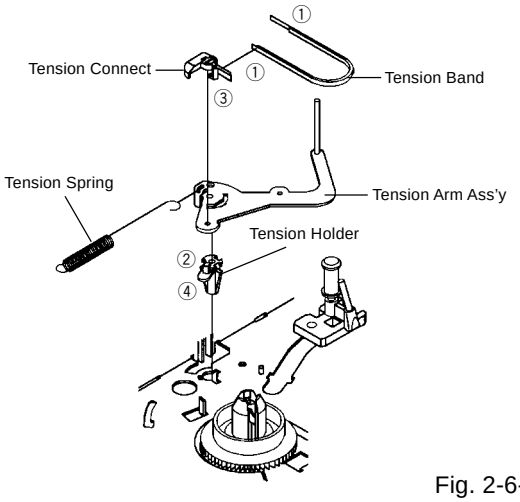


Fig. 2-6-B

NOTE

1. In case of the Tension Band installation, note the direction of the installation. **(Refer to Fig. 2-6-C)**
2. In case of the Tension Band installation, install correctly as Fig. 2-6-D.
3. In case of the Tension Connect installation, install as the circled section of Fig. 2-6-E.

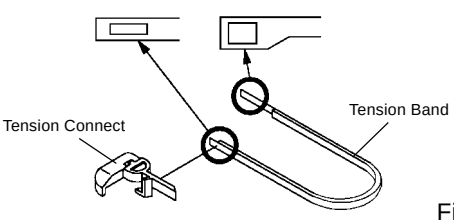


Fig. 2-6-C

DISASSEMBLY INSTRUCTIONS

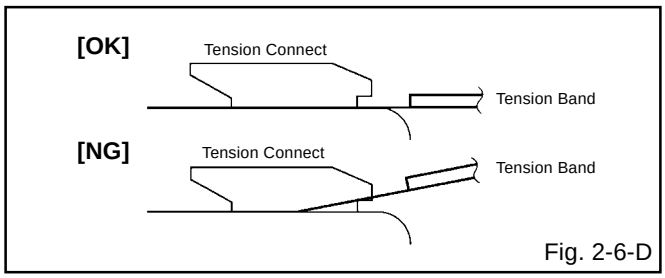


Fig. 2-6-D

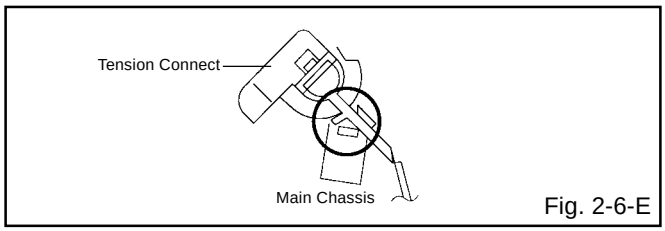


Fig. 2-6-E

2-7: T BRAKE ARM/T BRAKE BAND (Refer to Fig. 2-7-A)

1. Remove the T Brake Spring.
2. Turn the T Brake Arm clockwise and bend the hook section to remove it.
3. Unlock the 2 supports ① and remove the T Brake Band.

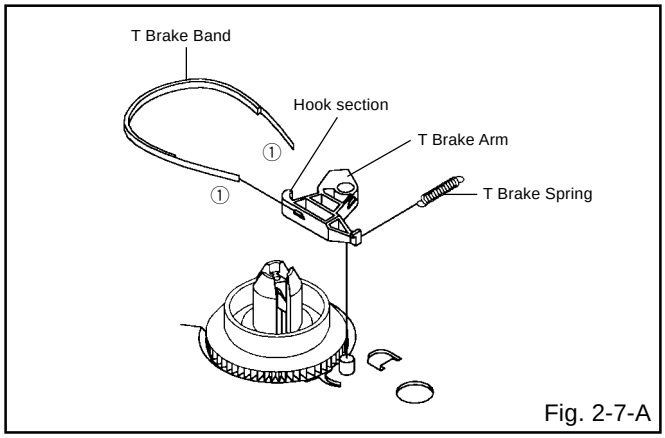


Fig. 2-7-A

NOTE

1. In case of the T Brake Band installation, install correctly as Fig. 2-7-B.

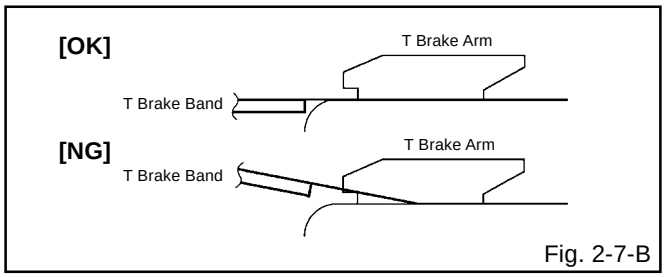


Fig. 2-7-B

2-8: S REEL/T REEL/IDLER ARM ASS'Y/IDLER GEAR (Refer to Fig. 2-8-A)

1. Remove the S Reel and T Reel.
2. Remove the 2 Polyslider Washers ①.
3. Remove the Idler Arm Ass'y and Idler Gear.

NOTE

1. Take care not to damage the gears of the S Reel and T Reel.
2. The Polyslider Washer may be remained on the back of the reel.
3. Take care not to damage the shaft.
4. Do not touch the section "A" of S Reel and T Reel. (Use gloves.) **(Refer to Fig. 2-8-A)** Do not adhere the stains on it.
5. When you install the reel, clean the shaft and grease it. (If you do not grease, noise may be heard in FF/REW mode.)
6. After installing the reel, adjust the height of the reel. **(Refer to MECHANICAL ADJUSTMENT)**

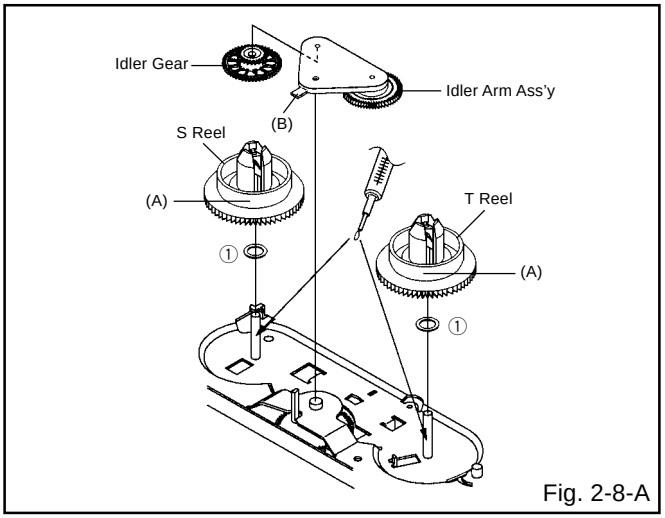


Fig. 2-8-A

NOTE

1. In case of the S Reel and T Reel installation, check if the correct parts are installed. **(Refer to Fig. 2-8-B)**
2. In case of the Idler Arm Ass'y installation, install correctly as Fig. 2-8-C. And also set it so that the section "B" of Fig. 2-8-A is placed under the Main Chassis tab.

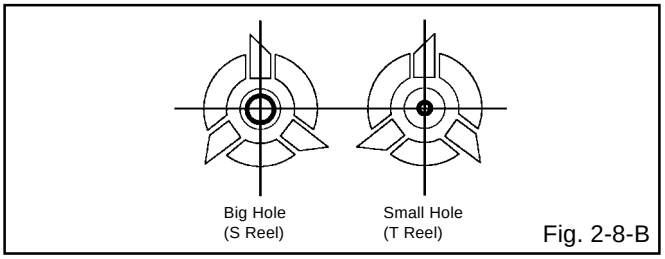


Fig. 2-8-B

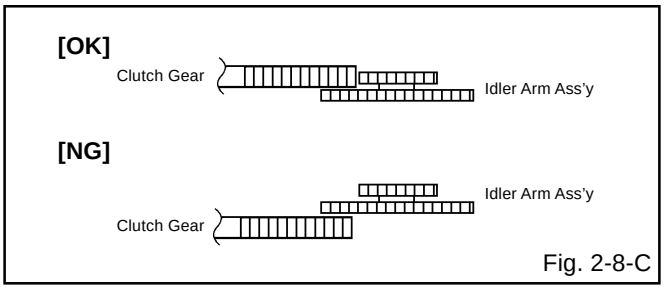


Fig. 2-8-C

DISASSEMBLY INSTRUCTIONS

2-9: CASSETTE OPENER/PINCH ROLLER BLOCK/P5 ARM ASS'Y (Refer to Fig. 2-9-A)

1. Unlock the support ① and remove the Cassette Opener.
2. Remove the Pinch Roller Block and P5 Arm Ass'y.

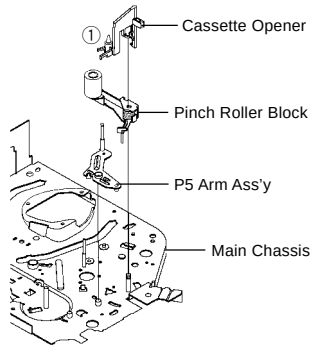


Fig. 2-9-A

NOTE

1. Do not touch the Pinch Roller. (Use gloves.)
2. In case of the Pinch Roller Block and the Pinch Roller Cam installation, install correctly as Fig. 2-9-B.

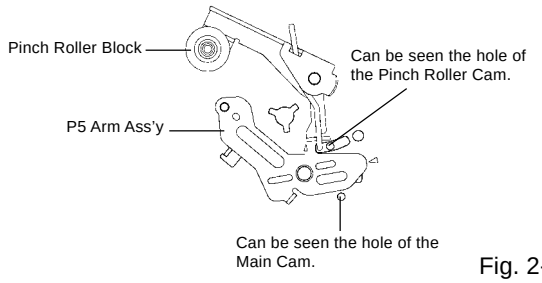


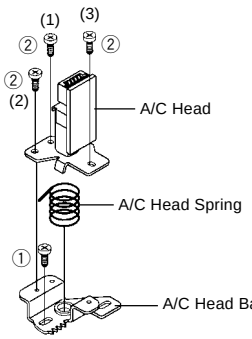
Fig. 2-9-B

2-10: A/C HEAD (Refer to Fig. 2-10-A)

1. Remove the screw ①.
2. Remove the A/C Head Base.
3. Remove the 3 screws ②.
4. Remove the A/C Head and A/C Head Spring.

NOTE

1. Do not touch the A/C Head. (Use gloves.)
2. When you install the A/C Head Spring, install as shown in Fig. 2-10-B.
3. When you install the A/C Head, tighten the screw (1) first, then tighten the screw (2), finally tighten the screw (3).



• Screw Torque: 5 ± 0.5kgf•cm (Screw ①)

Fig. 2-10-A

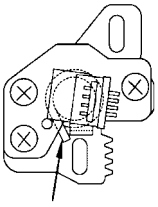
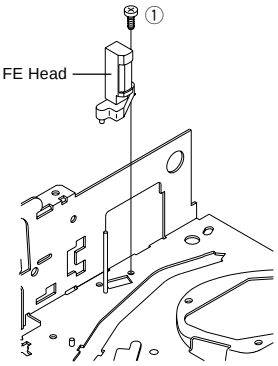


Fig. 2-10-B

2-11: FE HEAD (RECORDER ONLY) (Refer to Fig. 2-11)

1. Remove the screw ①.
2. Remove the FE Head.



• Screw Torque: 5 ± 0.5kgf•cm
• The FE Head is not installed on the Video Cassette Player.

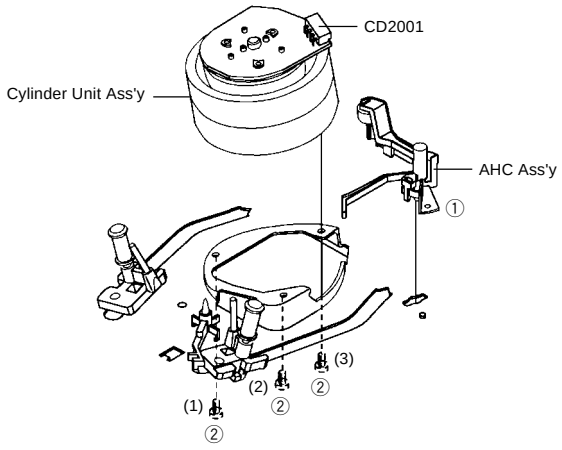
Fig. 2-11

2-12: CYLINDER UNIT ASS'Y (Refer to Fig. 2-12)

1. Unlock the support ① and remove the AHC Ass'y.
2. Disconnect the following connector: **(CD2001)**.
3. Remove the 3 screws ②.
4. Remove the Cylinder Unit Ass'y.

NOTE

1. When you install the Cylinder Unit Ass'y, tighten the screws from (1) to (3) in order while pulling the Ass'y toward the left front direction.



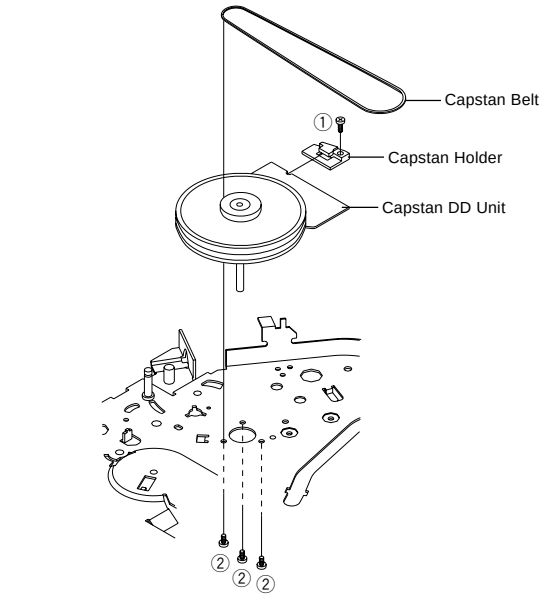
• Screw Torque: 3 ± 0.5kgf•cm

Fig. 2-12

DISASSEMBLY INSTRUCTIONS

2-13: CAPSTAN DD UNIT (Refer to Fig. 2-13)

1. Remove the Capstan Belt.
2. Remove the screw ①.
3. Remove the Capstan Holder.
4. Remove the 3 screws ②.
5. Remove the Capstan DD Unit.



• Screw Torque: 4 ± 0.5kgf•cm

Fig. 2-13

2-14: MAIN CAM/PINCH ROLLER CAM/JOINT GEAR (Refer to Fig. 2-14-A)

1. Remove the E-Ring ①, then remove the Main Cam.
2. Remove the E-Ring ②, then remove the Pinch Roller Cam and Joint Gear.

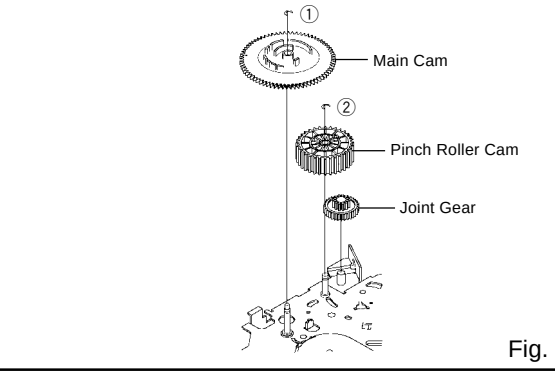


Fig. 2-14-A

NOTE

1. In case of the Pinch Roller Cam and Main Cam installation, install them as the circled section of Fig. 2-14-B so that the each markers are met. **(Refer to Fig. 2-14-B)** And also can be seen the Main Chassis hole through the Main Cam maker hole.

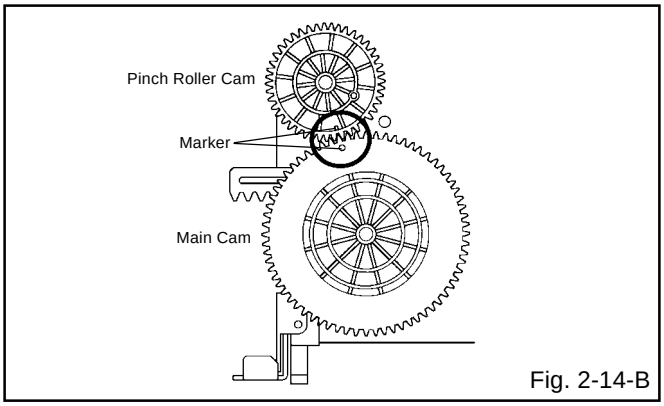


Fig. 2-14-B

2-15: LOADING GEAR S/T UNIT (Refer to Fig. 2-15-A)

1. Remove the E-Ring ① and remove the Main Loading Gear.
2. Remove the Main Rod, Tension Lever, Loading Arm S Unit and Loading Arm T Unit.

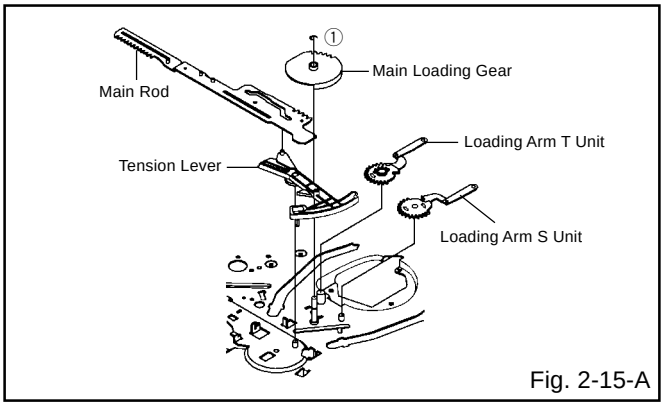


Fig. 2-15-A

DISASSEMBLY INSTRUCTIONS

NOTE

1. When you install the Loading Arm S Unit, Loading Arm T Unit and Main Loading Gear, align each marker. **(Refer to Fig. 2-15-B)**

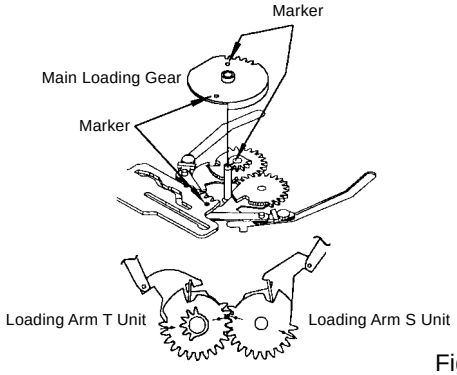


Fig. 2-15-B

2-16: CLUTCH ASS'Y/RING SPRING/CLUTCH LEVER/ CLUTCH GEAR (Refer to Fig. 2-16-A)

1. Remove the Polyslider Washer ①.
2. Remove the Clutch Ass'y and Ring Spring.
3. Remove the Clutch Lever.
4. Remove the Coupling Gear, Coupling Spring and Clutch Gear.

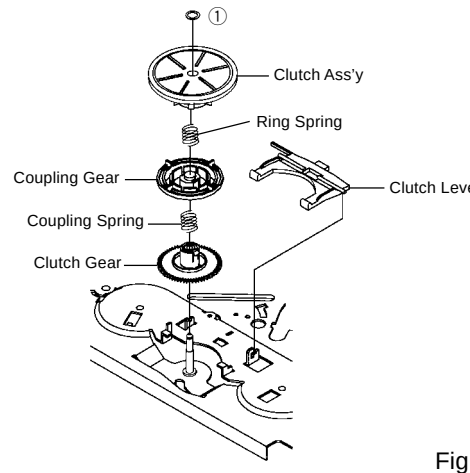


Fig. 2-16-A

NOTE

1. In case of the Clutch Ass'y installation, install it with inserting the spring of the Clutch Ass'y into the dent of the Coupling Gear. **(Refer to Fig. 2-16-B)**

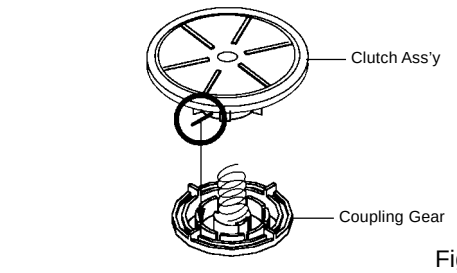


Fig. 2-16-B

2-17: CASSETTE GUIDE POST/INCLINED BASE S/T UNIT/P4 CAP/LED REFLECTOR (Refer to Fig. 2-17-A)

1. Remove the P4 Cap.
2. Unlock the support ① and remove the Cassette Guide Post.
3. Remove the Inclined Base S/T Unit.
4. Remove the screw ②.
5. Remove the LED Reflector.

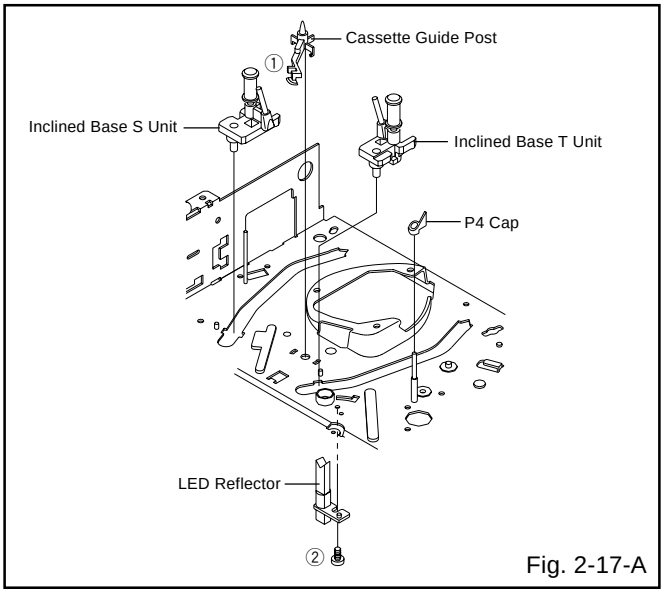


Fig. 2-17-A

NOTE

1. Do not touch the roller of Guide Roller.
2. In case of the P4 Cap installation, install it with parallel for "A" and "B" of Fig. 2-17-B.
3. In case of the Cassette Guide Post installation, install correctly as the circled section of Fig. 2-17-C.

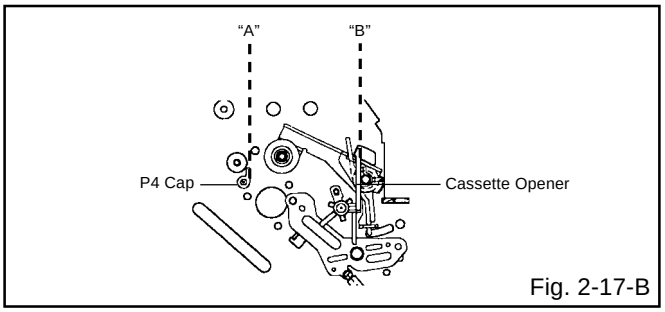


Fig. 2-17-B

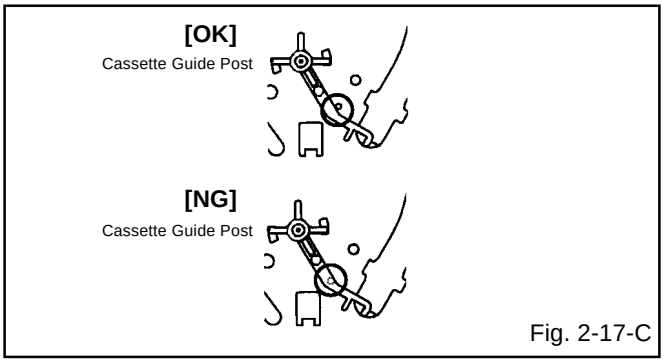


Fig. 2-17-C

DISASSEMBLY INSTRUCTIONS

3. REMOVAL OF DVD DECK PARTS

NOTE

1. Disassemble only the DVD DECK PARTS parts listed here. Minute adjustments are needed if the disassembly is done. If the repair is needed except listed parts, replace the DVD MECHA ASS'Y.

3-1: TRAY (Refer to Fig. 3-1-A)

1. Set the Tray opened. **(Refer to the DISC REMOVAL METHOD AT NO POWER SUPPLY)**
2. Unlock the 2 supports ① and remove the Tray.

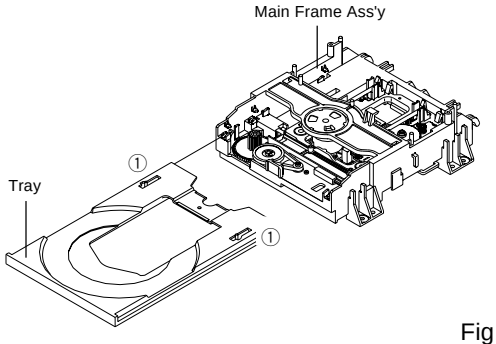


Fig. 3-1-A

NOTE

1. In case of the Tray installation, install them as the circled section of Fig. 3-1-B so that the each markers are met.

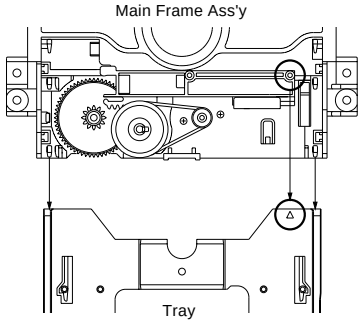


Fig. 3-1-B

3-2: MAIN CHASSIS ASS'Y (Refer to Fig. 3-2-A)

1. Remove the screw ①.
2. Unlock the 2 supports ②.
3. Remove the Insulator (R) from the Main Frame Ass'y.
4. Remove the Main Chassis Ass'y.

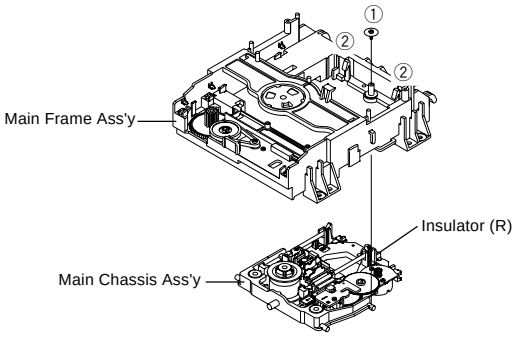


Fig. 3-2-A

NOTE

1. In case of the Main Chassis Ass'y, install it from (1) to (4) in order. **(Refer to Fig. 3-2-B)**
2. In case of the Main Chassis Ass'y installation, hook the wire on the Main Frame Ass'y as shown Fig. 3-2-C.

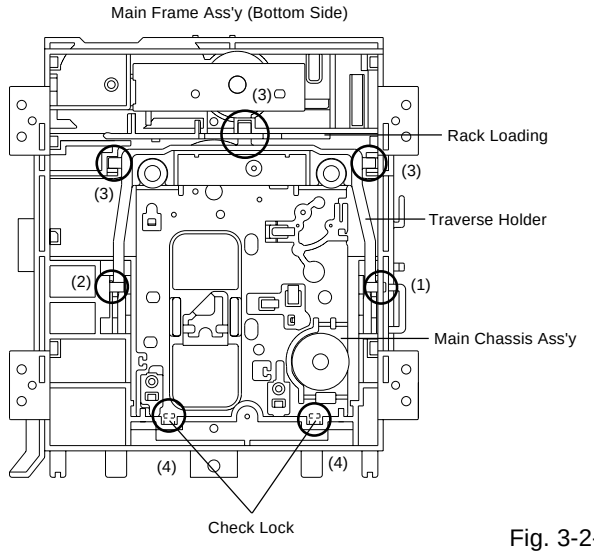


Fig. 3-2-B

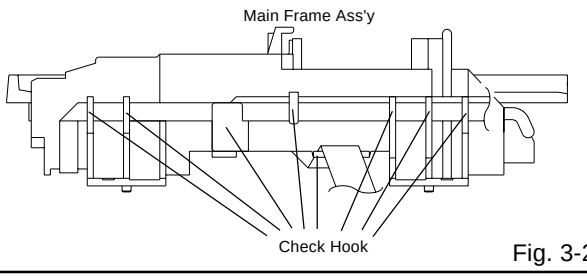
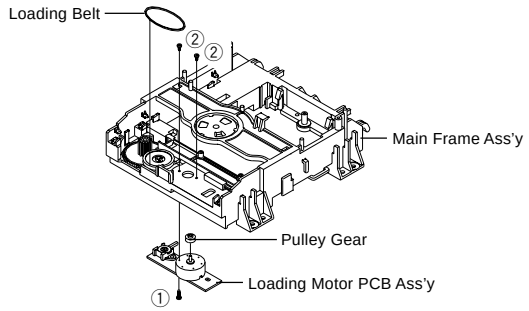


Fig. 3-2-C

DISASSEMBLY INSTRUCTIONS

3-3: LOADING MOTOR PCB ASS'Y/ LOADING BELT (Refer to Fig. 3-3-A)

1. Remove the Loading Belt.
2. Remove the screw ①.
3. Remove the 2 screws ②.
4. Remove the Loading Motor PCB Ass'y.
5. Remove the Pulley Gear.



• Screw Torque: 2.5 ± 0.3kgf•cm (Screw ①)
• Screw Torque: 1.0 ± 0.3kgf•cm (Screw ②)

Fig. 3-3-A

NOTE

1. In case of the Pulley Motor installation, check if the value of the Fig. 3-3-B is correct.
2. When installing the Loading Motor PCB Ass'y, install it correctly as Fig. 3-3-C.
3. In case of the Loading Motor PCB Ass'y installation, hook the wire on the Main Frame Ass'y as shown Fig. 3-3-C.

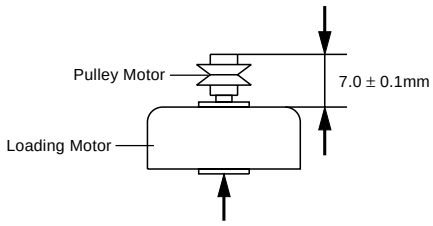


Fig. 3-3-B

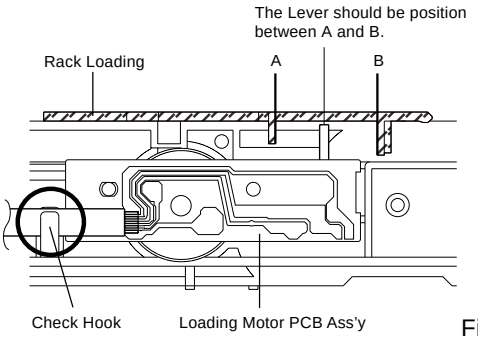


Fig. 3-3-C

3-4: RACK LOADING/MAIN GEAR/PULLEY GEAR (Refer to Fig. 3-4-A)

1. Press down the catcher ① and slide the Rack Loading.
2. Unlock the support ② and remove the Pulley Gear.
3. Remove the Main Gear.

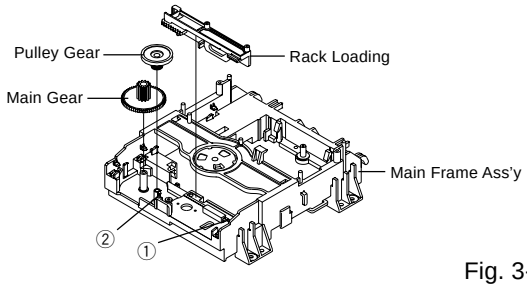


Fig. 3-4-A

NOTE

1. In case of the Rack Loading installation, do not mesh it to the Main Gear as shown the Fig. 3-4-B.

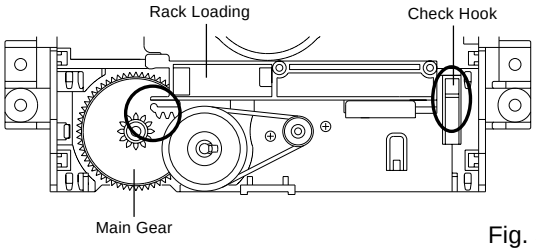


Fig. 3-4-B

3-5: CLAMPER ASS'Y (Refer to Fig. 3-5-A)

1. Press the Clamper and rotate the Clamper Plate clockwise, then unlock the 3 supports ①.
2. Remove the Clamper Plate, Clamper Magnet and Clamper.

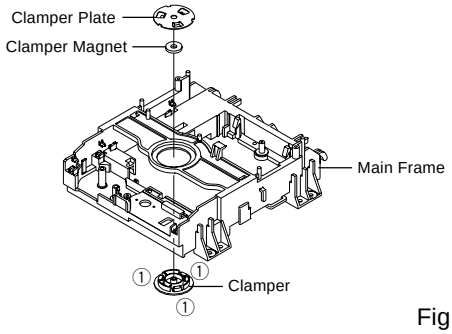


Fig. 3-5-A

DISASSEMBLY INSTRUCTIONS

NOTE

1. In case of the Clamper Ass'y installation, install correctly as Fig. 3-5-B.

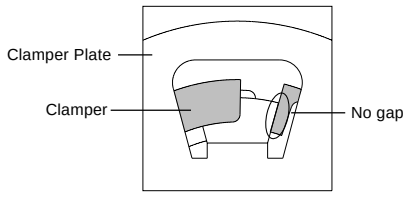


Fig. 3-5-B

3-6: TRAVERSE HOLDER/INSULATOR (F)/INSULATOR (R) (Refer to Fig. 3-6-A)

1. Remove the Traverse Holder.
2. Remove the 2 Insulator (F).
3. Remove the Insulator (R).

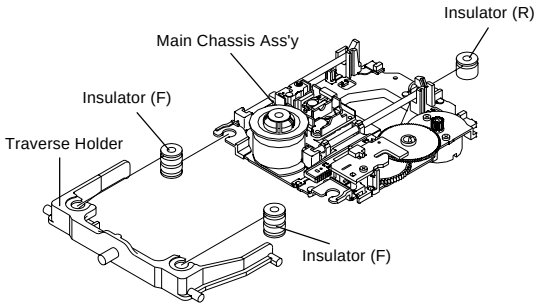


Fig. 3-6-A

NOTE

1. In case of the Insulator (F) installation, install correctly as Fig. 3-6-B.
2. In case of the Insulator (R) installation, install correctly as Fig. 3-6-C.

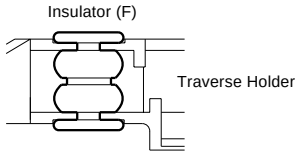


Fig. 3-6-B

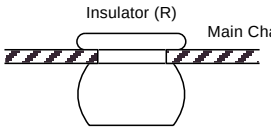


Fig. 3-6-C

3-7: SWITCH PCB ASS'Y/MIDDLE GEAR/FEED MOTOR (Refer to Fig. 3-7-A)

1. Remove the screw ①.
2. Remove the Switch PCB Ass'y.
3. Unlock the support ②.
4. Remove the Middle Gear.
5. Remove the 2 screws ③.
6. Remove the Feed Motor.
7. Remove the Motor Gear.

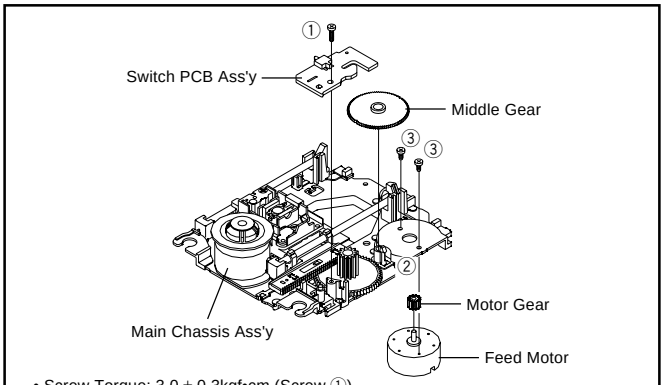


Fig. 3-7-A

NOTE

1. In case of the Motor Gear installation, check if the value of the Fig. 3-7-B is correct.
2. When installing the wire of the Switch PCB Ass'y, install it correctly as Fig. 3-7-C.
3. After the assembly of the Main Chassis Ass'y, hook the wire on the Main Chassis Ass'y as shown Fig. 3-7-D.

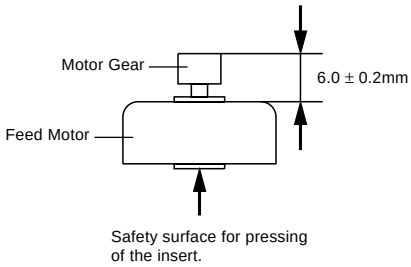


Fig. 3-7-B

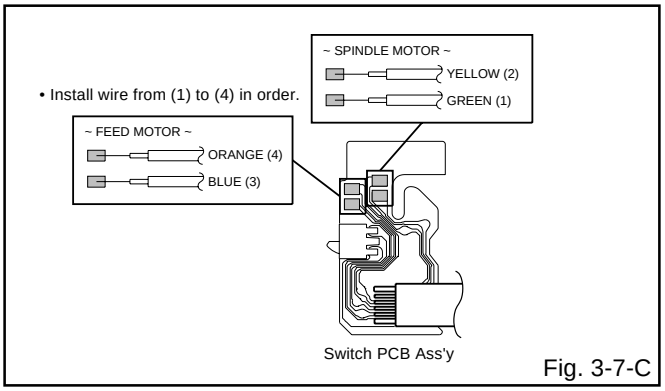
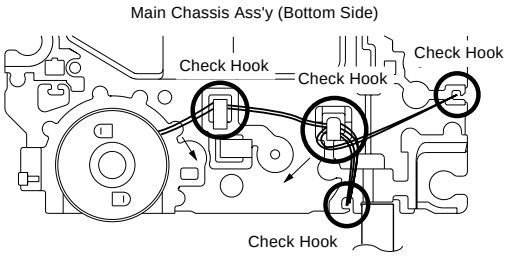


Fig. 3-7-C

DISASSEMBLY INSTRUCTIONS



• Loosen the wire in the direction of the arrow.

Fig. 3-7-D

3-8: FFC WIRE HANDLING

1. When installing the FFC, fold it correctly and install it as shown from Fig. 3-8-A to Fig. 3-8-C.

NOTE

1. Do not make the folding lines except the specified positions for the FFC.

[24 pin FFC]

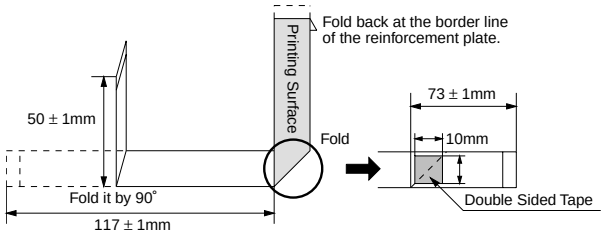
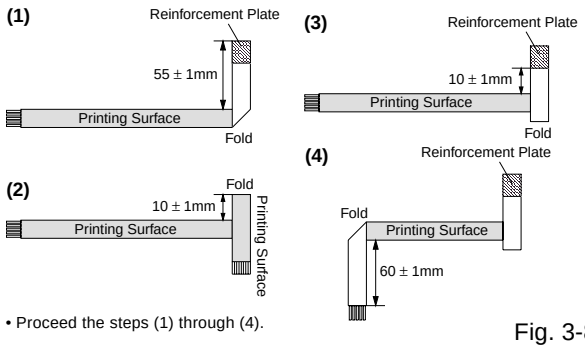


Fig. 3-8-A

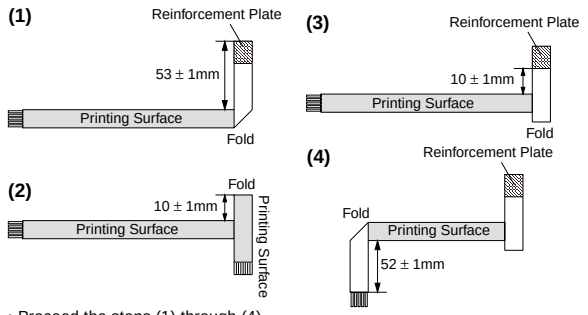
[5 pin FFC]



• Proceed the steps (1) through (4).

Fig. 3-8-B

[6 pin FFC]



• Proceed the steps (1) through (4).

Fig. 3-8-C

DISASSEMBLY INSTRUCTIONS

4. REMOVAL OF ANODE CAP

Read the following **NOTED** items before starting work.

* After turning the power off there might still be a potential voltage that is very dangerous. When removing the Anode Cap, make sure to discharge the Anode Cap's potential voltage.
* Do not use pliers to loosen or tighten the Anode Cap terminal, this may cause the spring to be damaged.

REMOVAL

1. Follow the steps as follows to discharge the Anode Cap. **(Refer to Fig. 4-1.)**
   Connect one end of an Alligator Clip to the metal part of a flat-blade screwdriver and the other end to ground.
   While holding the plastic part of the insulated Screwdriver, touch the support of the Anode with the tip of the Screwdriver.
   A cracking noise will be heard as the voltage is discharged.

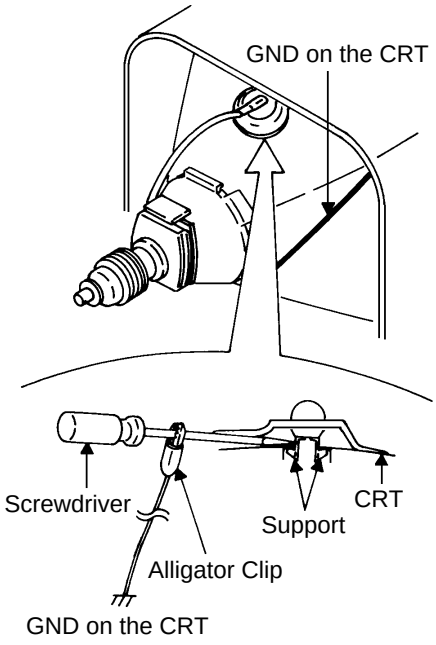


Fig. 4-1

2. Flip up the sides of the Rubber Cap in the direction of the arrow and remove one side of the support. **(Refer to Fig. 4-2.)**

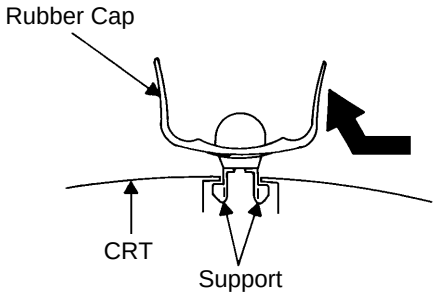


Fig. 4-2

3. After one side is removed, pull in the opposite direction to remove the other.

NOTE

Take care not to damage the Rubber Cap.

INSTALLATION

1. Clean the spot where the cap was located with a small amount of alcohol. **(Refer to Fig. 4-3.)**

NOTE

Confirm that there is no dirt, dust, etc. at the spot where the cap was located.

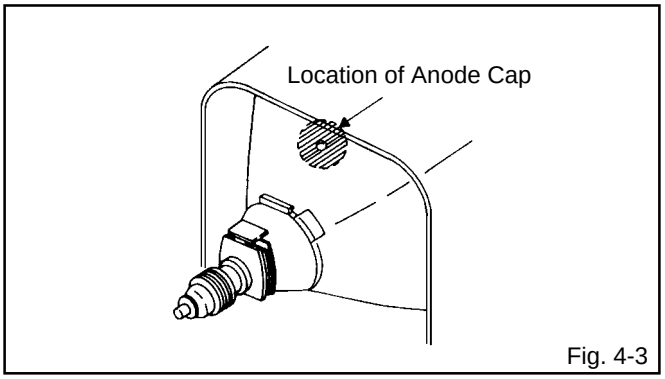


Fig. 4-3

2. Arrange the wire of the Anode Cap and make sure the wire is not twisted.
3. Turn over the Rubber Cap. **(Refer to Fig. 4-4.)**

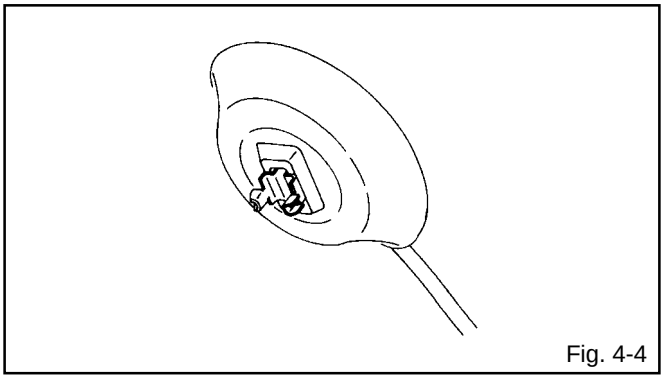


Fig. 4-4

4. Insert one end of the Anode Support into the anode button, then the other as shown in **Fig. 4-5**.

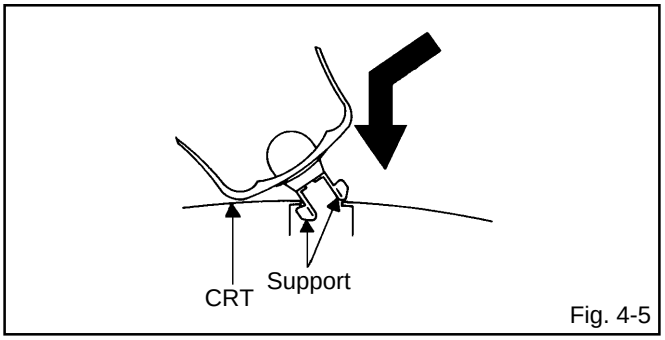


Fig. 4-5

5. Confirm that the Support is securely connected.
6. Put on the Rubber Cap without moving any parts.

DISASSEMBLY INSTRUCTIONS

5. REMOVAL AND INSTALLATION OF FLAT PACKAGE IC

REMOVAL

1. Put Masking Tape (cotton tape) around the Flat Package IC to protect other parts from any damage. **(Refer to Fig. 5-1.)**

   NOTE

   Masking is carried out on all the parts located within 10 mm distance from IC leads.

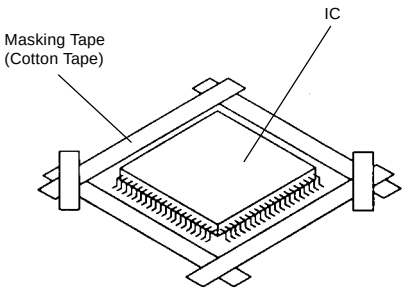


Fig. 5-1

2. Heat the IC leads using a blower type IC desoldering machine. **(Refer to Fig. 5-2.)**

   NOTE

   Do not rotate or move the IC back and forth , until IC can move back and forth easily after desoldering the leads completely.

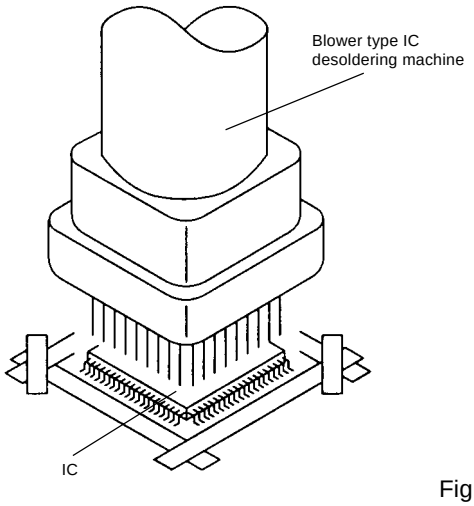


Fig. 5-2

3. When IC starts moving back and forth easily after desoldering completely, pickup the corner of the IC using a tweezers and remove the IC by moving with the IC desoldering machine. **(Refer to Fig. 5-3.)**

   NOTE

   Some ICs on the PCB are affixed with glue, so be careful not to break or damage the foil of each IC leads or solder lands under the IC when removing it.

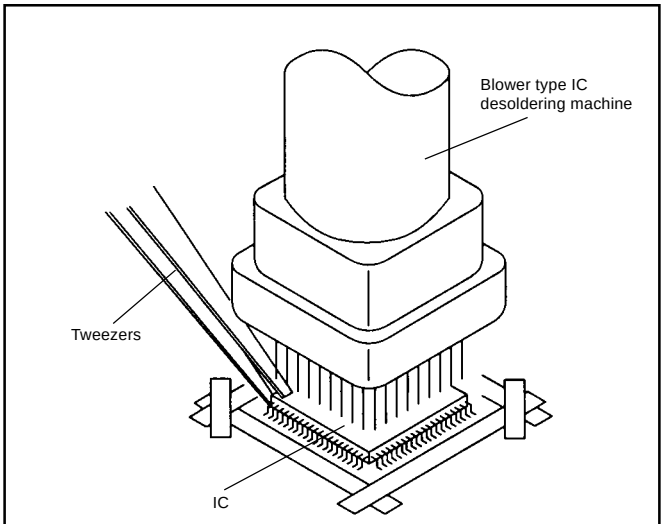


Fig. 5-3

4. Peel off the Masking Tape.
5. Absorb the solder left on the pattern using the Braided Shield Wire. **(Refer to Fig. 5-4.)**

   NOTE

   Do not move the Braided Shield Wire in the vertical direction towards the IC pattern.

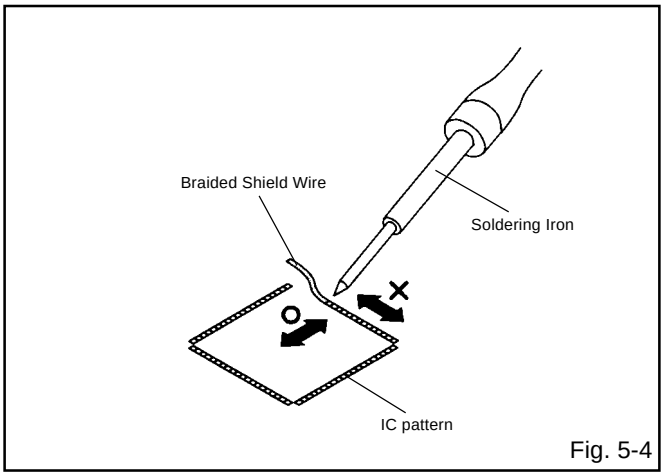


Fig. 5-4

DISASSEMBLY INSTRUCTIONS

INSTALLATION

1. Take care of the polarity of new IC and then install the new IC fitting on the printed circuit pattern. Then solder each lead on the diagonal positions of IC temporarily. **(Refer to Fig. 5-5.)**

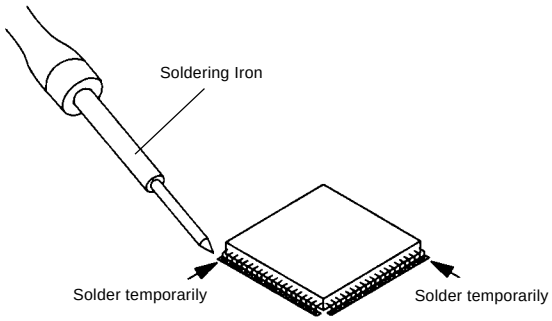


Fig. 5-5

2. Supply the solder from the upper position of IC leads sliding to the lower position of the IC leads. **(Refer to Fig. 5-6.)**

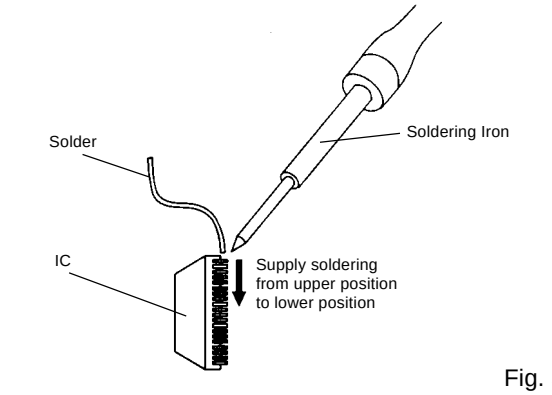


Fig. 5-6

3. Absorb the solder left on the lead using the Braided Shield Wire. **(Refer to Fig. 5-7.)**

   NOTE

   Do not absorb the solder to excess.

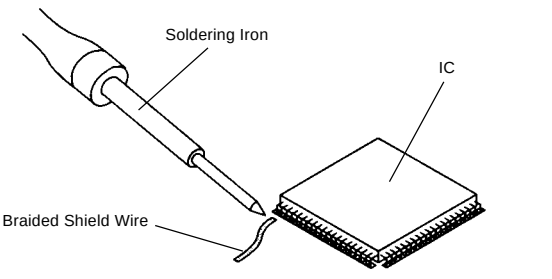


Fig. 5-7

4. When bridge-soldering between terminals and/or the soldering amount are not enough, resolder using a Thin-tip Soldering Iron. **(Refer to Fig. 5-8.)**

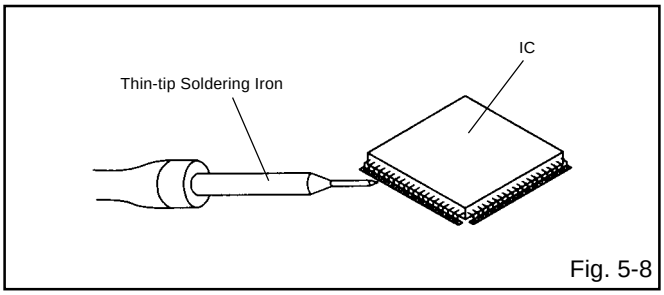


Fig. 5-8

5. Finally, confirm the soldering status on four sides of the IC using a magnifying glass.
   Confirm that no abnormality is found on the soldering position and installation position of the parts around the IC. If some abnormality is found, correct by resoldering.

   NOTE

   When the IC leads are bent during soldering and/or repairing, do not repair the bending of leads. If the bending of leads are repaired, the pattern may be damaged. So, always be sure to replace the IC in this case.

KEY TO ABBREVIATIONS

A	**A/C**	:	Audio/Control
	ACC	:	Automatic Color Control
	AE	:	Audio Erase
	AFC	:	Automatic Frequency Control
	AFT	:	Automatic Fine Tuning
	AFT DET	:	Automatic Fine Tuning Detect
	AGC	:	Automatic Gain Control
	AMP	:	Amplifier
	ANT	:	Antenna
	A.PB	:	Audio Playback
	APC	:	Automatic Phase Control
	ASS'Y	:	Assembly
	AT	:	All Time
	AUTO	:	Automatic
	A/V	:	Audio/Video
B	**BGP**	:	Burst Gate Pulse
	BOT	:	Beginning of Tape
	BPF	:	Bandpass Filter
	BRAKE SOL	:	Brake Solenoid
	BUFF	:	Buffer
	B/W	:	Black and White
C	**C**	:	Capacitance, Collector
	CASE	:	Cassette
	CAP	:	Capstan
	CARR	:	Carrier
	CH	:	Channel
	CLK	:	Clock
	CLOCK (SY-SE)	:	Clock (Syscon to Servo)
	COMB	:	Combination, Comb Filter
	CONV	:	Converter
	CPM	:	Capstan Motor
	CTL	:	Control
	CYL	:	Cylinder
	CYL-M	:	Cylinder-Motor
	CYL SENS	:	Cylinder-Sensor
D	**DATA (SY-CE)**	:	Data (Syscon to Servo)
	dB	:	Decibel
	DC	:	Direct Current
	DD Unit	:	Direct Drive Motor Unit
	DEMOD	:	Demodulator
	DET	:	Detector
	DEV	:	Deviation
E	**E**	:	Emitter
	EF	:	Emitter Follower
	EMPH	:	Emphasis
	ENC	:	Encoder
	ENV	:	Envelope
	EOT	:	End of Tape
	EQ	:	Equalizer
	EXT	:	External
F	**F**	:	Fuse
	FBC	:	Feed Back Clamp
	FE	:	Full Erase
	FF	:	Fast Forward, Flip-flop
	FG	:	Frequency Generator
	FL SW	:	Front Loading Switch
	FM	:	Frequency Modulation
	FSC	:	Frequency Sub Carrier
	FWD	:	Forward
G	**GEN**	:	Generator
	GND	:	Ground
H	**H.P.F**	:	High Pass Filter
	H.SW	:	Head Switch
	Hz	:	Hertz
I	**IC**	:	Integrated Circuit
	IF	:	Intermediate Frequency
	IND	:	Indicator
	INV	:	Inverter
K	**KIL**	:	Killer
L	**L**	:	Left
	LED	:	Light Emitting Diode
	LIMIT AMP	:	Limiter Amplifier
	LM, LDM	:	Loading Motor
	LP	:	Long Play
	L.P.F	:	Low Pass Filter
	LUMI.	:	Luminance
M	**M**	:	Motor
	MAX	:	Maximum
	MINI	:	Minimum
	MIX	:	Mixer, mixing
	MM	:	Monostable Multivibrator
	MOD	:	Modulator, Modulation
	MPX	:	Multiplexer, Multiplex
	MS SW	:	Mecha State Switch
N	**NC**	:	Non Connection
	NR	:	Noise Reduction
O	**OSC**	:	Oscillator
	OPE	:	Operation
P	**PB**	:	Playback
	PB CTL	:	Playback Control
	PB-C	:	Playback-Chrominance
	PB-Y	:	Playback-Luminance
	PCB	:	Printed Circuit Board
	P. CON	:	Power Control
	PD	:	Phase Detector
	PG	:	Pulse Generator
	P-P	:	Peak-to Peak
R	**R**	:	Right
	REC	:	Recording
	REC-C	:	Recording-Chrominance
	REC-Y	:	Recording-Luminance
	REEL BRK	:	Reel Brake
	REEL S	:	Reel Sensor
	REF	:	Reference
	REG	:	Regulated, Regulator
	REW	:	Rewind
	REV, RVS	:	Reverse
	RF	:	Radio Frequency
	RMC	:	Remote Control
	RY	:	Relay
S	**S. CLK**	:	Serial Clock
	S. COM	:	Sensor Common
	S. DATA	:	Serial Data
	SEG	:	Segment
	SEL	:	Select, Selector
	SENS	:	Sensor
	SER	:	Search Mode
	SI	:	Serial Input
	SIF	:	Sound Intermediate Frequency
	SO	:	Serial Output
	SOL	:	Solenoid
	SP	:	Standard Play

KEY TO ABBREVIATIONS

S	**STB**	:	Serial Strobe
	SW	:	Switch
	SYNC	:	Synchronization
	SYNC SEP	:	Sync Separator, Separation
T	**TR**	:	Transistor
	TRAC	:	Tracking
	TRICK PB	:	Trick Playback
	TP	:	Test Point
U	**UNREG**	:	Unregulated
V	**V**	:	Volt
	VCO	:	Voltage Controlled Oscillator
	VIF	:	Video Intermediate Frequency
	VP	:	Vertical Pulse, Voltage Display
	V.PB	:	Video Playback
	VR	:	Variable Resistor
	V.REC	:	Video Recording
	VSF	:	Visual Search Fast Forward
	VSR	:	Visual Search Rewind
	VSS	:	Voltage Super Source
	V-SYNC	:	Vertical-Synchronization
	VT	:	Voltage Tuning
X	**X'TAL**	:	Crystal
Y	**Y/C**	:	Luminance/Chrominance

SERVICE MODE LIST

This unit is provided with the following SERVICE MODES so you can repair, examine and adjust easily.
To enter to the SERVICE MODE function, press and hold both buttons simultaneously on the main unit or on the main unit and on the remote control for more than the standard time (second).

Set Condition	Set Key	Remocon Key	Standard Time	Operations
TV mode	VOL. (-) MIN	0	2	Releasing of V-CHIP PASSWORD.
TV mode	VOL. (-) MIN	1	2	Initialization of factory data. NOTE: Do not use this for data normal servicing. If you set factory initialization, the memories are reset such as the clock setting, the channel setting, the POWER ON total hours, and PLAY/REC total hours.
VCR mode (Playback)	VOL. (-) MIN	2	2	Horizontal position adjustment of OSD. NOTE: Also can be adjusted by using the Adjustment MENU. Refer to the "ELECTRICAL ADJUSTMENT" (OSD HORIZONTAL).
VCR mode (Playback)	VOL. (-) MIN	3	2	Adjust the PG SHIFTER automatically. Refer to the "ELECTRICAL ADJUSTMENT" (PG SHIFTER).
VCR mode (Playback)	VOL. (-) MIN	4	2	Adjust the PG SHIFTER manually. Refer to the "ELECTRICAL ADJUSTMENT" (PG SHIFTER).
VCR mode (Playback)	VOL. (-) MIN	5	2	Adjusting of the Tracking to the center position.
TV mode	VOL. (-) MIN	6	2	Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
VCR mode	VOL. (-) MIN	7	2	Can be checked of the INITIAL DATA of MEMORY IC. Refer to the "WHEN REPLACING EEPROM (MEMORY) IC".
ALL mode	VOL. (-) MIN	9	2	Display of the Adjustment MENU on the screen. Refer to the "ELECTRICAL ADJUSTMENT" (On-Screen Display Adjustment).
DVD mode (No disc)	REC/OTR	4	2	Initialization of factory on DVD data. NOTE: Do not use this for normal servicing. The function will only work without the setting of DVD disc at DVD mode.
DVD mode (No disc)	STOP (DVD)	2	2	Releasing of PARENTAL LOCK. Refer to the “PARENTAL CONTROL - RATING LEVEL”. NOTE: The function will only work without the setting of DVD disc at DVD mode.
DVD mode (Stop)	STOP (DVD)	9	3	Tray cannot be opened. Refer to the “TRAY LOCK”. NOTE: No indications on the screen when the Tray Lock is setting.

PREVENTIVE CHECKS AND SERVICE INTERVALS

The following standard table depends on environmental conditions and usage.
Parts replacing time does not mean the life span for individual parts.
Also, long term storage or misuse may cause transformation and aging of rubber parts.
The following list means standard hours, so the checking hours depends on the conditions.

Time / Parts Name	500 hours	1,000 hours	1,500 hours	2,000 hours	2,500 hours	Notes
Audio Control Head	■	■	■	●	●	Clean those parts in contact with the tape.
Full Erase Head (Recorder only)	■	■	■	●	●	
Capstan Belt		●	●	●	●	Clean the rubber, and parts which the rubber touches.
Pinch Roller	■	●	●	●	●	
Capstan DD Unit		●	●	●	●	
Loading Motor					●	
Tension Band		●	●	●	●	
T Brake Band		●	●	●	●	
Clutch Ass'y		●	●	●	●	
Idler Arm Ass'y		●	●	●	●	
Capstan Shaft	■	■	■	■	■	
Tape Running Guide Post	■	■	■	■	■	Replace when rolling becomes abnormal.
Cylinder Unit	■	●	●	●	●	Clean the Head

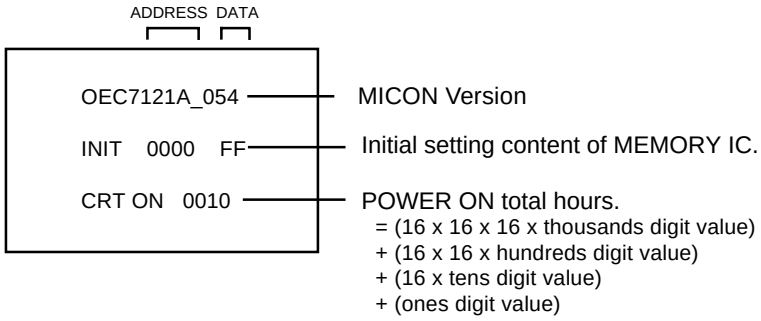
■ : Clean
● : Check it and if necessary, replace it.

CONFIRMATION OF HOURS USED

POWER ON total hours can be checked on the screen. Total hours are displayed in 16 system of notation.

NOTE: If you set a factory initialization, the total hours is reset to "0".

1. Turn on the POWER, and set to the TV mode.
2. Set the VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds.
4. After the confirmation of using hours, turn off the power.


ADDRESS DATA
OEC7121A_054
MICON Version
INIT 0000 FF
Initial setting content of MEMORY IC.
CRT ON 0010
POWER ON total hours.
= (16 x 16 x 16 x thousands digit value)
+ (16 x 16 x hundreds digit value)
+ (16 x tens digit value)
+ (ones digit value)

PREVENTIVE CHECKS AND SERVICE INTERVALS

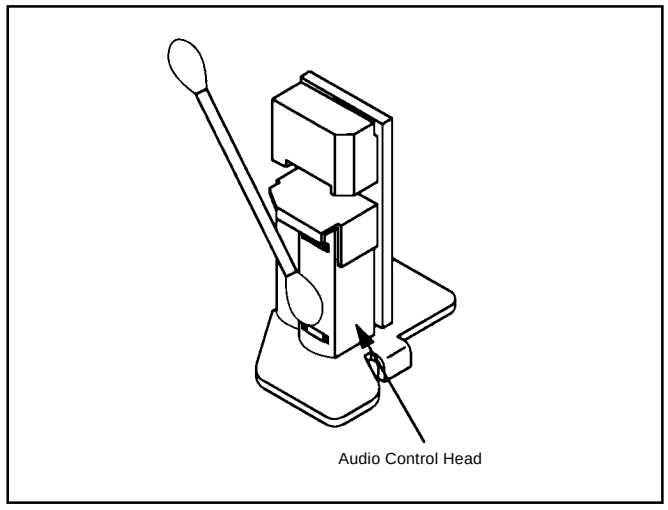
CLEANING

NOTE

After cleaning the heads with isopropyl alcohol, do not run a tape until the heads dry completely. If the heads are not completely dry and alcohol gets on the tape, damage may occur.

1. AUDIO CONTROL HEAD

Clean the Audio Control Head with a cotton stick soaked by alcohol. Clean the full erase head in the same manner. **(Refer to the figure below.)**



2. TAPE RUNNING SYSTEM

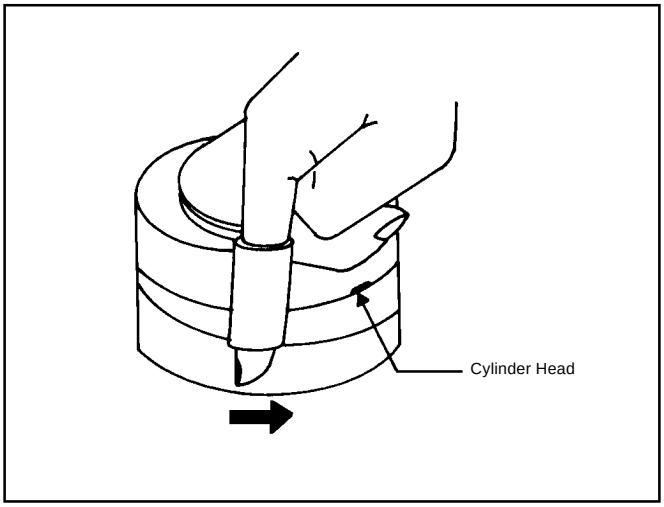
When cleaning the tape transport system, use gauze moistened with isopropyl alcohol.

3. CYLINDER

Wrap a piece of chamois around your finger. Dip it in isopropyl alcohol. Hold it to the cylinder head softly. Turn the cylinder head counterclockwise to clean it (in the direction of the arrow). **(Refer to the figure below.)**

NOTE

Do not exert force against the cylinder head. Do not move the chamois upward or downward on the head.
Use the chamois one by one.



WHEN REPLACING EEPROM (MEMORY) IC

If a service repair is undertaken where it has been required to change the MEMORY IC, the following steps should be taken to ensure correct data settings while making reference to TABLE 1 and 2.

TV side EEPROM (IC101) initial setting

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
0000	FF	72	3D	01	A2	1F	97	FF	4A	E4	B3	03	0D	36	03	64
0010	01	05	1F	24	40	45	5D	62	45	4A	67	0F	35	0A	AA	64
0020	68	00	A0	00	00	00	00	00	88	02	00	54	98	30	04	76
0030	77	05	07	21	10	03	00	22	75	D1	03	07	0A	40	40	40
0040	8F	C0	40	00	27	0A	0A	00	13	40	00	51	00	72	99	59
0050	68	99	5B	00	0A	02	56	00	00	04	04	E3	77	00	00	FD
0060	13	3B	20	FE	00	01	01	01	00	00	00	00	C9	C8	E8	BC
0070	40	0F	00	11	33	66	00	00	00	0F	1E	6D	FF	FF	FA	FA
0080	FF	C0	52	50	8B	00	06	06	22	00	96	8B	6C	90	22	00
0090	11	F0	00	07	00	00	00	B4	01	48	33	06	08	0A	0C	0E
00A0	10	12	14	15	16	17	18	19	1A	1B	1C	1D	1D	1E	1E	1F
00B0	1F	20	20	21	21	22	22	23	23	24	24	25	25	26	26	27
00C0	27	28	28	29	29	2A	2A	2B	2B	2C	2C	2D	2D	2E	2F	30
00D0	31	32	34	36	38	3A	3C	3D	3E	3F	3F	42	00	00	00	0B
00E0	15	9A	03	00	00	00	00	00	00	00	00	00	00	00	00	00
00F0	00	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…
0100	DC	E1	11	22	66	01	71	69	33	00	0E	38	22	66	DA	71
0110	69	33	00	22	00	77	5E	99	60	03	82	88	88	00	82	01
0120	00	03	82	03	82	0F	85	00	82	8D	83	00	82	00	01	82
0130	00	82	00	82	0D	00	05	11	00	11	00	11	1A	00	1C	00
0140	00	80	14	14	7D	27	1E	F4	05	16	A4	5E	5E	00	7F	7F
0150	00	7E	7E	0E	0A	00	00	00	00	84	00	00	00	00	00	83
0160	00	00	00	00	00	2E	41	E1	2E	2E	FF	FF	FF	FF	FF	FF
0170	FF	FF	FB	00	10	01	FB	00	20	01	FB	00	4D	01	FB	00
0180	2A	01	FB	00	10	01	FB	00	05	01	FB	00	19	01	FB	00
0190	42	01	FB	00	27	01	FB	00	05	01	44	44	44	17	A5	FF
01A0	0F	FB	00	10	01	FB	00	28	01	FB	00	4D	01	FB	00	33
01B0	01	FB	00	13	01	01	01	0E	01	FB	00	3C	01	FB	00	62
01C0	01	FB	00	4A	01	01	01	13	01	FB	00	FD	00	FB	00	13
01D0	01	FB	00	3E	01	FB	00	21	01	01	01	FE	00	FB	00	0D
01E0	01	FB	00	2A	01	FB	00	57	01	FB	00	38	01	FF	00	10
01F0	01	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…

Table 1-1

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
0800	35	90	18	F0	07	14	44	80	80	80	7B	63	7A	6B	66	B5
0810	30	0B	0F	02	01	00	00	01	00	00	00	00	00	00	00	00
0820	35	90	18	F0	07	14	35	80	80	80	7E	63	7E	6B	66	B5
0830	30	0B	0F	02	01	00	00	01	00	00	00	00	00	00	00	00
0840	67	10	88	B0	05	1D	B0	80	80	80	7E	63	7E	66	66	B5
0850	20	0B	0F	02	00	00	00	01	00	00	00	00	00	00	00	00
0860	89	80	88	B0	2B	03	94	80	80	80	7B	63	7A	66	66	B5
0870	30	0B	0F	02	00	00	00	01	00	00	00	00	00	00	00	00
0880	35	90	18	F0	07	14	44	80	80	80	7D	63	7D	6B	66	B5
0890	30	0B	0F	02	01	00	00	01	00	00	00	00	00	00	00	00
08A0	35	90	18	F0	07	14	35	80	80	80	7D	63	7D	6B	66	B5
08B0	30	0B	0F	02	01	00	00	01	00	00	00	00	00	00	00	00
08C0	67	10	88	B0	2B	14	B0	80	80	80	7E	63	7E	6D	66	B5
08D0	20	0B	0F	02	00	00	00	01	00	00	00	00	00	00	00	00
08E0	89	80	88	B0	2B	66	94	80	80	80	7F	63	7F	6D	66	B5
08F0	30	0B	0F	02	00	00	00	01	00	00	00	00	00	00	00	00
1000	60	02	3E	25	D7	00	76	20	00	1E	04	23	0C	10	08	00
1010	40	00	00	02	40	0E	40	72	06	00	00	04	01	04	06	19
1020	00	E9	02	55	00	52	03	3A	00	F8	01	08	00	02	00	00
1030	00	00	00	88	01	AA	01	00	03	02	00	01	01	50	90	00
1040	50	60	00	1F	90	00	AF	60	00	1F	90	00	7F	60	00	1F
1050	90	00	E0	69	01	52	90	00	00	36	E8	01	00	E0	02	E4
1060	00	FD	00	94	00	04	00	4A	01	7B	01	1B	08	80	47	00
1070	01	DF	02	41	00	C0	02	2C	00	F4	01	58	02	41	00	C0
1080	02	2C	00	F4	01	58	02	20	08	80	C5	14	28	64	08	70
1090	C0	73	07	04	5D	10	58	38	12	18	06	30	30	08	0E	14
10A0	E2	B3	06	EA	01	94	02	03	16	03	18	1A	1D	46	01	79
10B0	02	20	00	DC	00	2E	01	FF	FF	DE	8A	67	34	33	33	10
10C0	42	65	77	98	BA	DC	0E	EB	00	2C	01	00	00	00	00	00
10D0	00	00	00	00	00	00	00	00	00	08	88	88	08	80	06	F0
10E0	00	28	00	05	06	EA	01	30	02	0B	02	11	02	24	BF	0D
10F0	0D	02	01	00	00	6F	DF	06	5A	03	0D	02	0D	02	00	00

Table 1-2

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
1100	00	00	00	00	20	03	01	01	01	01	2A	47	04	CD	02	DE
1110	01	1C	07	DF	02	F8	01	38	04	B1	03	69	00	38	04	0C
1120	03	01	00	81	FE	05	19	01	C8	00	E6	07	D8	01	E9	06
1130	77	80	80	B6	05	B6	05	00	00	02	4C	04	32	02	EF	02
1140	10	00	EF	02	F8	01	94	00	73	03	85	00	8E	00	4A	00
1150	0A	04	36	04	4C	04	36	04	12	00	2E	02	30	02	32	02
1160	F4	03	40	08	F4	03	30	02	33	02	63	04	65	04	38	00
1170	38	00	31	02	33	02	63	04	65	04	2C	00	32	08	94	00
1180	14	08	6C	08	98	08	20	04	12	00	2E	02	30	02	32	02
1190	32	08	01	00	6C	08	98	08	20	04	30	02	32	02	F4	03
11A0	40	08	06	00	0D	08	80	35	CC	C7	01	00	00	25	08	00
11B0	A9	00	40	00	01	00	00	00	00	00	00	00	00	00	00	00
11C0	00	00	00	1F	02	00	12	00	00	00	00	00	00	00	0D	02
11D0	5A	03	09	00	00	00	00	00	42	00	82	00	51	03	EA	01
11E0	0B	00	47	00	59	03	37	00	2B	00	0D	00	55	00	06	00
11F0	2E	00	31	00	03	00	55	00	04	00	59	0F	00	00	02	60
1200	02	0F	00	26	00	00	00	00	15	18	00	00	00	00	00	00
1210	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1220	00	00	00	00	00	00	00	00	00	01	00	00	00	00	00	00
1230	00	00	00	00	00	00	00	00	01	00	20	00	6F	02	6D	03
1240	FF	FF	FF	FF	00	00	00	00	00	00	00	00	00	53	0D	67
1250	0D	08	00	06	01	00	FF	FF	FF	00	00	48	00	00	00	00
1260	00	00	00	00	00	00	00	00	00	00	00	00	01	00	00	00
1270	00	00	00	00	00	02	00	00	00	00	00	00	00	00	00	10
1280	01	00	03	01	AA	55	26	42	01	28	11	00	00	00	00	00
1290	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	01
12A0	00	08	00	00	00	00	00	00	00	00	3F	1A	42	67	01	07
12B0	1E	35	45	0A	15	00	00	00	00	00	00	02	00	01	00	00
12C0	00	00	00	00	00	00	00	E6	CE	68	07	22	00	00	00	00
12D0	00	00	05	5F	03	00	00	00	00	00	00	00	00	00	00	00
12E0	00	00	00	00	00	00	00	00	12	00	2E	02	12	00	2E	02
12F0	12	00	2E	02	12	00	2E	02	01	00	01	00	00	00	00	00

Table 1-3

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
1300	00	00	00	00	00	00	00	02	07	13	C0	80	50	80	08	A0
1310	02	40	06	00	00	00	00	02	00	00	00	00	00	00	00	00
1320	00	00	00	00	00	00	00	0F	10	04	04	80	10	00	00	00
1330	00	00	00	00	00	00	81	36	12	02	00	42	09	70	00	01
1340	0F	00	02	00	00	00	00	00	00	00	02	00	00	00	00	00
1350	00	00	02	00	00	00	00	00	00	56	02	10	00	63	00	64
1360	00	03	04	02	03	10	00	02	06	00	04	00	C0	00	20	00
1370	00	02	00	00	E8	01	E7	01	00	00	00	01	02	00	00	00
1380	00	00	00	00	09	00	00	50	00	03	00	00	00	00	00	00
1390	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
13A0	00	BC	00	23	01	00	00	00	00	00	00	00	00	00	00	00
13B0	00	00	00	00	01	00	00	00	00	00	00	00	00	00	00	00
13C0	00	00	00	00	00	01	03	00	00	00	23	00	00	00	CC	02
13D0	9C	00	1A	16	01	00	00	02	0A	00	00	00	00	00	00	00
13E0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
13F0	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00	03
1400	20	C0	1E	25	D7	00	76	20	00	1E	00	23	02	2B	0A	00
1410	40	00	00	02	41	0D	40	5A	03	03	06	02	00	08	00	01
1420	00	06	00	6E	00	4D	03	23	00	05	02	01	00	02	00	8F
1430	00	83	02	88	01	55	00	00	03	08	00	FB	00	90	89	00
1440	D0	5B	00	5F	89	00	2F	5C	00	5F	89	00	FF	5B	00	5F
1450	89	00	A8	58	01	92	89	00	00	36	E8	04	00	E3	02	D9
1460	00	0A	01	94	00	04	00	4A	01	7B	01	1B	08	80	47	00
1470	01	DF	02	41	00	C0	02	3A	00	EA	01	58	02	41	00	C0
1480	02	32	00	FA	01	58	02	20	08	80	C5	14	28	64	08	70
1490	C0	73	07	04	5D	10	58	38	12	18	06	30	30	08	0E	14
14A0	E2	B3	06	EA	01	94	02	03	16	03	18	1A	1D	46	01	79
14B0	02	1E	00	DE	00	2E	01	FF	FF	DE	8A	67	34	33	33	10
14C0	42	65	77	98	BA	DC	EE	F7	00	2C	01	00	00	00	00	00
14D0	00	00	00	00	00	00	00	00	00	08	88	88	08	80	06	F0
14E0	00	28	00	05	06	EA	01	30	02	0B	02	11	02	24	BF	0D
14F0	0D	02	01	00	00	72	DF	06	5A	03	0D	02	0D	02	00	00

Table 1-4

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
1500	00	00	00	00	20	03	01	01	01	01	2A	47	04	AA	02	C7
1510	01	1C	07	DF	02	E0	01	38	04	B1	03	69	00	38	04	08
1520	03	01	00	81	FE	05	19	01	C8	00	F4	07	E4	01	F2	06
1530	77	80	80	B0	05	B0	05	00	00	02	4C	04	32	02	EF	02
1540	10	00	EF	02	E0	01	94	00	73	03	78	00	8A	00	4A	00
1550	0A	04	36	04	4C	04	36	04	01	00	12	00	2E	02	30	02
1560	32	02	F4	08	F4	03	30	02	33	02	63	04	65	04	D4	00
1570	D4	1F	31	02	33	02	63	04	65	04	2C	00	20	08	94	00
1580	14	08	6C	08	98	08	20	04	12	00	2E	02	30	02	32	02
1590	20	08	01	00	6C	08	98	08	20	04	30	02	32	02	F4	03
15A0	40	08	06	00	0F	08	75	F7	EF	C7	01	FF	FF	FF	FF	FF
15B0	60	19	3E	25	D7	00	76	20	00	00	00	23	0C	2B	03	00
15C0	40	00	00	02	41	0D	43	5A	03	00	00	02	00	08	00	07
15D0	00	06	00	4C	00	2B	03	1D	00	05	02	01	00	01	00	8F
15E0	00	83	02	88	00	01	00	00	00	00	00	00	00	02	00	00
15F0	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1600	00	00	A8	58	01	04	00	00	03	37	28	04	00	E3	02	E1
1610	00	1C	01	94	00	04	00	4A	01	7B	01	1B	08	80	47	00
1620	01	DF	02	41	00	C0	02	2C	00	F4	01	58	02	41	00	C0
1630	02	2C	00	F4	01	58	02	20	08	80	C5	14	28	64	08	70
1640	C0	73	07	04	5D	10	58	38	12	18	06	30	30	08	0E	14
1650	E2	B3	06	EA	01	94	02	03	16	03	18	1A	1D	46	01	79
1660	02	20	00	DC	00	2E	01	FF	FF	DE	8A	67	34	33	33	10
1670	42	65	77	98	BA	DC	EE	EB	00	2C	01	00	00	00	00	00
1680	00	00	00	00	00	00	00	00	00	08	88	88	08	80	06	F0
1690	00	28	00	05	06	EA	01	30	02	0B	02	11	02	24	BF	0D
16A0	0D	02	01	00	00	73	DF	06	AD	01	1A	04	1A	04	00	00
16B0	00	00	00	00	20	03	01	01	01	01	2A	45	04	AA	02	C7
16C0	01	8E	03	DF	02	E0	01	38	04	B1	03	69	00	04	00	0F
16D0	03	01	43	88	7B	05	B6	00	00	08	F2	06	03	01	C9	05
16E0	77	80	80	DD	02	DD	02	00	00	03	4D	04	65	04	EF	02
16F0	10	00	EF	02	E0	01	4A	00	29	03	6F	00	33	04	4A	00

Table 1-5

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
1700	0A	04	36	04	4C	04	10	02	12	00	2E	02	30	02	32	02
1710	FA	01	20	04	FA	01	30	02	33	02	63	04	65	04	1C	00
1720	1C	00	31	02	33	02	63	04	65	04	16	00	F3	03	4A	00
1730	0A	04	36	04	4C	04	10	02	12	00	2E	02	30	02	32	02
1740	F3	03	01	00	36	04	4C	04	10	02	30	02	32	02	FA	01
1750	20	04	06	00	0F	00	75	36	CC	07	01	FF	FF	FF	FF	FF
1760	60	19	3E	25	D7	00	36	20	00	00	00	23	00	2B	02	00
1770	40	00	00	02	0E	0B	4F	72	06	00	00	08	00	02	00	06
1780	00	01	00	11	01	25	06	14	00	E7	02	01	00	01	00	13
1790	01	D5	04	88	00	FF	00	00	00	00	00	00	00	02	00	00
17A0	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
17B0	00	00	38	A5	03	04	00	00	03	37	28	90	00	06	00	E5
17C0	00	0E	01	94	00	04	00	4A	01	7B	01	1B	08	80	47	00
17D0	01	DF	02	41	00	C0	02	2C	00	F4	01	58	02	41	00	C0
17E0	02	2C	00	F4	01	58	02	20	08	80	C5	14	28	64	08	70
17F0	C0	73	07	04	5D	10	58	38	12	18	06	30	30	08	0E	14
1800	E2	B3	06	EA	01	94	02	03	16	03	18	1A	1D	46	01	79
1810	02	20	00	DC	00	2E	01	FF	FF	DE	8A	67	34	33	33	10
1820	42	65	77	98	BA	DC	EE	EB	00	2C	01	00	00	00	00	00
1830	00	00	00	00	00	00	00	00	00	08	88	88	08	80	06	F0
1840	00	28	00	05	06	EA	01	30	02	0B	02	11	02	24	BF	0D
1850	0D	02	01	00	00	70	DF	06	60	03	09	02	08	02	00	00
1860	00	00	00	00	24	03	01	01	01	01	2A	45	04	15	04	B9
1870	02	56	05	14	05	DF	02	38	04	8A	06	BA	00	38	04	0C
1880	03	00	CE	57	68	0A	12	00	45	00	8E	0E	45	00	45	0F
1890	00	00	00	80	07	80	07	00	00	03	99	08	65	04	24	05
18A0	10	00	24	05	DF	02	94	00	A8	05	BA	00	72	00	94	00
18B0	14	08	6C	08	98	08	20	04	12	00	2E	02	30	02	32	02
18C0	F4	03	40	08	F4	03	30	02	33	02	63	04	65	04	38	00
18D0	38	00	31	02	33	02	63	04	65	04	2C	00	5A	00	94	00
18E0	14	08	6C	08	98	08	20	04	12	00	2E	02	30	02	32	02
18F0	5A	00	01	00	6C	08	98	08	20	04	30	02	32	02	F4	03

Table 1-6

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
1900	40	08	06	00	11	08	75	B5	EC	07	01	FF	FF	FF	FF	FF
1910	60	19	3E	02	09	00	34	1E	00	00	00	03	00	2B	02	00
1920	40	00	00	02	B3	0A	0E	98	08	00	00	08	00	02	00	06
1930	00	01	00	B0	00	44	08	10	00	2C	02	01	00	01	00	6E
1940	01	72	06	88	01	AA	00	00	00	00	00	00	00	02	00	00
1950	01	00	00	00	00	00	00	00	00	00	00	00	00	00	00	00
1960	00	00	2C	FF	03	04	00	00	03	37	28	90	00	06	00	E5
1970	00	0E	01	94	00	04	00	4A	01	7B	01	1B	08	80	47	00
1980	01	DF	02	41	00	C0	02	32	00	FA	01	58	02	41	00	C0
1990	02	32	00	FA	01	58	02	20	08	80	C5	14	28	64	08	70
19A0	C0	73	07	04	5D	10	58	38	12	18	06	30	30	08	0E	14
19B0	E2	B3	06	EA	01	94	02	03	16	03	18	1A	1D	46	01	79
19C0	02	1A	00	E6	00	2E	01	FF	FF	DE	8A	67	34	33	33	10
19D0	42	65	77	98	BA	DC	EE	EB	00	2C	01	00	00	00	00	00
19E0	00	00	00	00	00	00	00	00	00	08	88	88	08	80	06	F0
19F0	00	28	00	05	06	EA	01	30	02	0B	02	11	02	24	BF	0D
1A00	0D	02	01	00	00	70	DF	06	60	03	09	02	08	02	00	00
1A10	00	00	00	00	24	03	01	01	01	01	2A	41	04	00	00	00
1A20	00	00	04	94	07	1C	02	38	04	C0	09	16	01	38	04	0C
1A30	03	00	FF	80	68	0F	2A	00	88	00	18	0F	4D	00	4D	0F
1A40	00	00	00	80	07	80	07	00	00	07	99	08	65	04	A4	07
1A50	10	00	A4	07	1C	02	94	00	28	08	A3	00	78	00	94	00
1A60	14	08	6C	08	98	08	20	04	12	00	2E	02	30	02	32	02
1A70	F4	03	40	08	F4	03	30	02	33	02	63	04	65	04	38	00
1A80	38	00	31	02	33	02	63	04	65	04	2C	00	5E	00	94	00
1A90	14	08	6C	08	98	08	20	04	12	00	2E	02	30	02	32	02
1AA0	5E	00	01	00	6C	08	98	08	20	04	30	02	32	02	F4	03
1AB0	40	08	07	00	11	08	75	76	EC	07	01	FF	FF	FF	FF	FF
1AC0	68	00	47	03	35	00	05	02	30	58	01	04	00	E2	02	D9
1AD0	00	1D	01	AA	02	C7	01	7E	06	DE	02	E0	01	B1	03	69
1AE0	00	07	00	00	5D	FC	07	64	01	5E	08	69	00	69	0F	00
1AF0	00	80	07	00	06	59	00	EE	02	EE	02	E0	01	72	03	AA

Table 1-7

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
1B00	00	10	01	38	00	38	00	6C	00	6C	00	00	F7	EF	07	00
1B10	6E	00	4D	03	23	00	05	02	30	58	01	04	00	E2	02	D9
1B20	00	46	01	AA	02	C7	01	50	05	DE	02	E0	01	B1	03	69
1B30	00	03	00	00	62	FC	05	35	01	3C	08	69	00	69	0F	00
1B40	00	80	07	80	07	00	00	EE	02	EE	02	E0	01	72	03	BD
1B50	00	10	01	38	00	38	00	6C	00	6C	00	01	F7	EF	C7	00
1B60	6E	00	4D	03	23	00	05	02	30	58	01	04	00	E2	02	E5
1B70	00	29	01	AA	02	C7	01	2C	06	DE	02	E0	01	B1	03	69
1B80	00	03	00	00	62	FC	05	35	01	3C	08	69	00	69	0F	00
1B90	00	80	07	80	07	00	00	EE	02	EE	02	E0	01	72	03	BD
1BA0	00	10	01	38	02	38	05	6C	00	6C	00	01	F7	EF	C7	00
1BB0	6E	00	4D	03	23	00	05	02	30	58	01	04	00	E2	02	D9
1BC0	00	0A	01	AA	02	C7	01	1C	07	DE	02	E0	01	B1	03	69
1BD0	00	03	00	00	62	FC	05	35	01	3C	08	69	00	69	0F	00
1BE0	00	80	07	80	07	00	00	EE	02	EE	02	E0	01	72	03	BD
1BF0	00	10	01	38	00	38	00	6C	00	6C	00	01	F7	EF	C7	00
1C00	5A	00	39	03	31	00	05	02	A8	58	01	04	00	E2	02	D9
1C10	00	04	01	AA	02	C7	01	42	03	DF	02	E0	01	B1	03	69
1C20	00	07	00	B1	51	FE	05	F5	00	FF	07	3F	00	BE	07	00
1C30	00	C0	03	80	01	AB	00	EF	02	EF	02	E0	01	29	03	59
1C40	00	9B	00	1C	00	1C	00	54	00	54	00	00	F7	EF	07	00
1C50	5C	00	3B	03	59	00	05	02	A8	58	01	90	00	06	00	E5
1C60	00	0E	01	AA	02	C7	01	AB	02	DF	02	E0	01	B1	03	69
1C70	00	03	00	00	61	FE	05	F5	00	00	08	3F	00	BF	07	00
1C80	00	C0	03	C0	03	00	00	EF	02	EF	02	E0	01	29	03	60
1C90	00	95	00	1C	00	1C	00	54	00	54	00	01	35	EC	07	00
1CA0	5C	00	3B	03	3E	00	05	02	A8	58	01	90	00	06	00	E5
1CB0	00	0E	01	AA	02	C7	01	13	03	DF	02	E0	01	B1	03	69
1CC0	00	03	00	00	61	12	06	F5	00	00	08	3F	00	BF	07	00
1CD0	00	C0	03	C0	03	00	00	EF	02	EF	02	E0	01	29	03	60
1CE0	00	95	00	1C	00	1C	00	54	00	54	00	01	35	EC	07	00
1CF0	5C	00	3B	03	1D	00	05	02	A8	58	01	90	00	06	00	E5

Table 1-8

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
1D00	00	0E	01	AA	02	C7	01	8E	03	DF	02	E0	01	B1	03	69
1D10	00	03	00	00	61	FE	05	F5	00	00	08	3F	00	BF	07	00
1D20	00	C0	03	C0	03	00	00	EF	02	EF	02	E0	01	29	03	60
1D30	00	95	00	1C	00	1C	00	54	00	54	00	01	35	EC	07	00
1D40	55	00	52	03	3A	00	F8	01	E0	69	01	01	00	E0	02	E4
1D50	00	13	01	CD	02	DE	01	7E	06	DF	02	F8	01	B1	03	69
1D60	00	07	00	00	5F	FE	07	81	01	94	08	69	00	69	0F	00
1D70	00	80	07	00	06	3F	00	EF	02	EF	02	F8	01	73	03	A6
1D80	00	1A	01	38	00	38	00	6C	00	6C	00	01	35	EC	C7	00
1D90	55	00	52	03	3A	00	F8	01	E0	69	01	01	00	E0	02	E4
1DA0	00	3B	01	CD	02	DE	01	4D	05	DF	02	F8	01	B1	03	69
1DB0	00	03	00	00	62	FE	05	36	01	52	08	69	00	69	0F	00
1DC0	00	80	07	80	07	00	00	EF	02	EF	02	F8	01	73	03	C3
1DD0	00	18	01	38	00	38	00	6C	00	6C	00	00	35	CC	C7	00
1DE0	55	00	52	03	3A	00	F8	01	E0	69	01	01	00	E0	02	E4
1DF0	00	20	01	CD	02	DE	01	1F	06	DF	02	F8	01	B1	03	69
1E00	00	03	00	00	62	FE	05	36	01	52	08	69	00	69	0F	00
1E10	00	80	07	80	07	00	00	EF	02	EF	02	F8	01	73	03	C3
1E20	00	18	01	38	00	38	00	6C	00	6C	00	00	35	CC	C7	00
1E30	55	00	52	03	3A	00	F8	01	E0	69	01	01	00	E0	02	E4
1E40	00	FE	00	CD	02	DE	01	1C	07	DF	02	F8	01	B1	03	69
1E50	00	03	00	00	62	FE	05	36	01	52	08	69	00	69	0F	00
1E60	00	80	07	80	07	00	00	EF	02	EF	02	F8	01	73	03	C3
1E70	00	18	01	38	00	38	00	6C	00	6C	00	00	35	CC	C7	00
1E80	44	47	1C	02	1C	02	0C	02	32	02	36	04	11	00	2D	02
1E90	2F	02	31	02	20	04	FF	1F	20	04	2F	02	31	02	2F	02
1EA0	31	02	2F	02	31	02	2F	02	31	02	36	04	11	00	2D	02
1EB0	2F	02	31	02	36	04	2F	02	31	02	20	04	FF	1F	FF	FF
1EC0	5A	00	39	03	31	00	05	02	A8	58	01	85	06	DF	02	E0
1ED0	01	B1	03	69	00	07	00	B1	51	FE	05	F5	00	FF	07	3F
1EE0	00	BF	07	00	00	00	C0	03	80	01	AC	00	EF	02	EF	02
1EF0	CD	01	29	03	59	00	9B	00	1C	00	1C	00	54	00	54	00

Table 1-9

WHEN REPLACING EEPROM (MEMORY) IC

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
1F00	00	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1F10	5C	00	3B	03	59	00	05	02	A8	58	01	58	05	DF	02	E0
1F20	01	B1	03	69	00	03	00	00	61	FE	05	F5	00	00	08	3F
1F30	00	BF	07	00	00	00	C0	03	C0	03	00	00	EF	02	EF	02
1F40	E0	01	29	03	60	00	95	00	1C	00	1C	00	54	00	54	00
1F50	01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1F60	5C	00	3B	03	3E	00	05	02	A8	58	01	22	06	DF	02	E0
1F70	01	B1	03	69	00	03	00	00	61	FE	05	F5	00	00	08	3F
1F80	00	BF	07	00	00	00	C0	03	C0	03	00	00	EF	02	EF	02
1F90	E0	01	29	03	60	00	95	00	1C	00	1C	00	54	00	54	00
1FA0	01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
1FB0	5C	00	3B	03	1D	00	05	02	A8	58	01	1C	07	DF	02	E0
1FC0	01	B1	03	69	00	03	00	00	61	FE	05	F5	00	00	08	3F
1FD0	00	BF	07	55	80	80	C0	03	C0	03	00	00	EF	02	EF	02
1FE0	E0	01	29	03	60	00	95	00	1C	00	1C	00	54	00	54	00
1FF0	01	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF	FF
2000	58	00	37	03	1D	00	05	02	A8	58	01	1C	07	DF	02	E0
2010	01	B1	03	69	00	03	01	43	82	FE	05	00	08	12	07	D7
2020	00	D5	05	77	80	80	DD	02	DD	02	00	00	EF	02	EF	02
2030	E0	01	29	03	7A	00	35	04	1C	00	1C	00	F3	03	F3	03
2040	01	…	…	…	…	…	…	…	…	…	…	…	…	…	…	…

Table 1-10

1. Turn on the POWER, and set to the TV mode.
2. Enter DATA SET mode by setting VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(6)** on the remote control for more than 2 seconds.
   ADDRESS and DATA should appear as FIG 1.
4. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
5. Press RIGHT/LEFT button to select DATA. When DATA is selected, it will "blink".
6. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
7. Pressing RIGHT/LEFT button will take you back to ADDRESS for further selection if necessary.
8. Repeat steps 4 to 7 until all data has been checked.
9. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

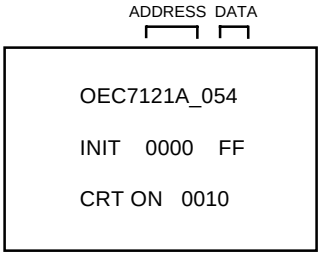


FIG. 1

After the data input, set to the initializing of shipping.

10. Turn on the POWER, and set to the TV mode.
11. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
12. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

WHEN REPLACING EEPROM (MEMORY) IC

VCR side EEPROM (IC1001) initial setting

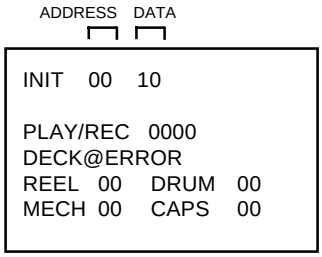


FIG. 2

INI	+0	+1	+2	+3	+4	+5	+6	+7	+8	+9	+A	+B	+C	+D	+E	+F
00	10	00	C6	06	12	2B	19	55	04	95	01	B1	9A	97	8C	A4
10	B1	01	00	01	39	01	22	75	61	2A	3B	00	00	00	23	24
20	00	00	00	A0	00	00	00	00	…	…	…	…	…	…	…	…

Table 2

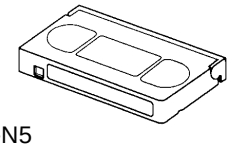
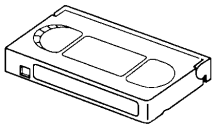
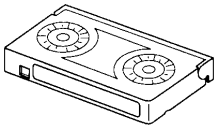
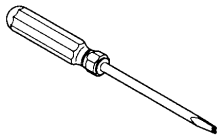
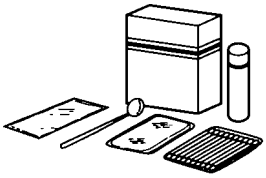
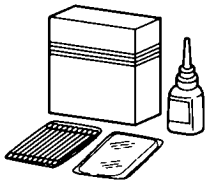
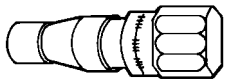
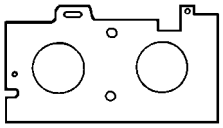
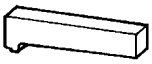
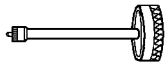
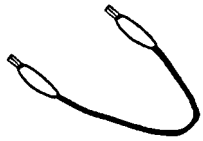
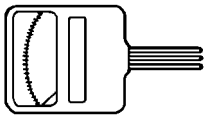
1. Turn on the POWER, and set to the TV mode.
2. Enter DATA SET mode by setting VOLUME to minimum.
3. Press both VOL. DOWN button on the set and Channel button **(7)** on the remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 1.
4. Again, Press both VOL. DOWN button on the set and Channel button **(7)** on the remote control for more than 2 seconds. ADDRESS and DATA should appear as FIG 2.
5. ADDRESS is now selected and should "blink". Using the UP/DOWN button on the remote, step through the ADDRESS until required ADDRESS to be changed is reached.
6. Press RIGHT/LEFT button to select DATA. When DATA is selected, it will "blink".
7. Again, step through the DATA using UP/DOWN button until required DATA value has been selected.
8. Pressing RIGHT/LEFT button will take you back to ADDRESS for further selection if necessary.
9. Repeat steps 5 to 8 until all data has been checked.
10. When satisfied correct DATA has been entered, turn POWER off (return to STANDBY MODE) to finish DATA input.

After the data input, set to the initializing of shipping.

11. Turn on the POWER, and set to the TV mode.
12. Press both VOL. DOWN button on the set and Channel button **(1)** on the remote control for more than 2 seconds.
13. After the finishing of the initializing of shipping, the unit will turn off automatically.

The unit will now have the correct DATA for the new MEMORY IC.

SERVICING FIXTURES AND TOOLS

Alignment Tape  ST-N5 ST-NF	Back tension cassette gauge  70909103	Torque cassette gauge (KT-300NR)  70909199	Taper nut driver  70909228
VTR cleaning kit 	VTR lubrication kit 	Grease 	JG002B Adapter JG002E Dial Torque Gauge (10~90gf•cm) JG002F (60~600gf•cm) 
JG022 Master Plane 	JG024A Reel Disk Height Adjustment Jig 	JG153 X Value Adjustment Screwdriver 	JG154 Cable 
JG185 Tentelometer 			

Ref. No.	Part No.	Parts Name	Remarks
JG002B	APJG002B00	Adapter	VSR Torque, Brake Torque (S Reel/T Reel Ass'y)
JG002E	APJG002E00	Dial Torque Gauge (10~90gf•cm)	Brake Torque (T Reel Ass'y)
JG002F	APJG002F00	Dial Torque Gauge (60~600gf•cm)	VSR Torque, Brake Torque (S Reel)
JG022	APJG022000	Master Plane	Reel Disk Height Adjustment
JG024A	APJG024A00	Reel Disk Height Adjustment Jig	Reel Disk Height Adjustment
JG153	APJG153000	X Value Adjustment Screwdriver	X Value Adjustment
JG154	APJG154000	Cable	Used to connect the test point of SERVICE and GROUND
JG185	APJG185000	Tentelometer	Confirmation of Tape Tension on Playback

PREPARATION FOR SERVICING

How to use the Servicing Fixture

1. Remove the TV/DVD/VCR Block from the set.
   Be sure to place the parts on a paper so that they have no short-circuit each other.
2. Short circuit between **TP1001** and **Ground** with the cable JG154.
   (The BOT, EOT, and the Reel Sensor do not work and the deck can be operated without a cassette tape.)
3. In case of using a cassette tape, press the STOP/EJECT button to insert or eject a cassette tape.
   Turn on the power and re-check the cable before checking the trouble points.

MECHANICAL ADJUSTMENTS

1. CONFIRMATION AND ADJUSTMENT

Read the following NOTES before starting work.

- Place an object which weighs between 450g~500g on the Cassette Tape to keep it steady when you want to make the tape run without the Cassette Holder. (Do not place an object which weighs over 500g.)

1-1: CONFIRMATION AND ADJUSTMENT OF REEL DISK HEIGHT

1. Turn on the power and set to the STOP mode.
2. Set the master plane **(JG022)** and reel disk height adjustment jig **(JG024A)** on the mechanism framework, taking care not to scratch the drum, as shown in **Fig. 1-1-A**.
3. While turning the reel and confirm the following points. Check if the surface "A" of reel disk is lower than the surface "B" of reel disk height adjustment jig **(JG024A)** and is higher than the surface "C". If it is not passed, place the height adjustment washers and adjust to 10(+2, -0)mm.
4. Adjust the other reel in the same way.

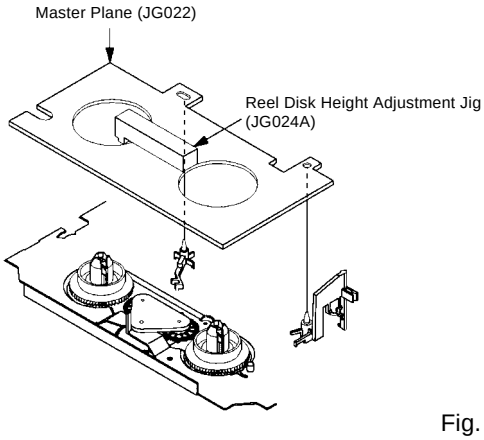


Fig. 1-1-A

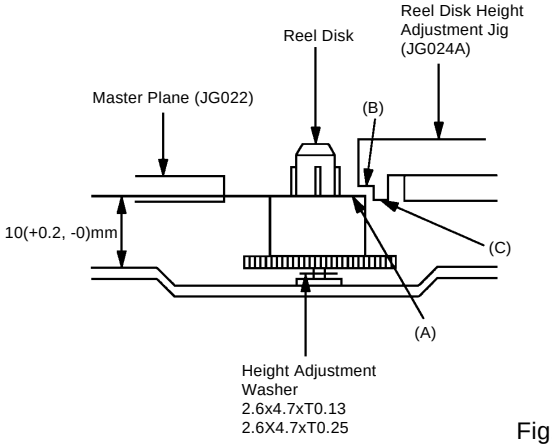


Fig. 1-1-B

1-2: CONFIRMATION AND ADJUSTMENT OF TENSION POST POSITION

1. Set to the PLAY mode.
2. Adjust the adjusting section for the Tension Arm position so that the Tension Arm top is within the standard line of Main Chassis.
3. While turning the S Reel clockwise, confirm that the edge of the Tension Arm is located in the position described above.

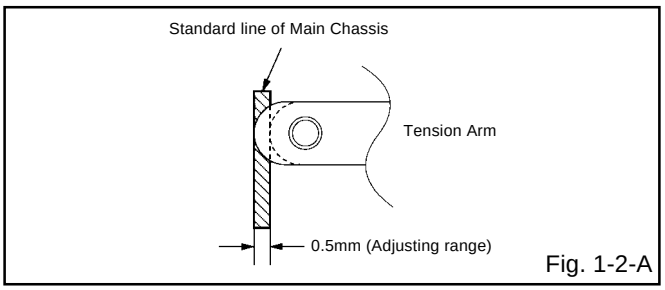


Fig. 1-2-A

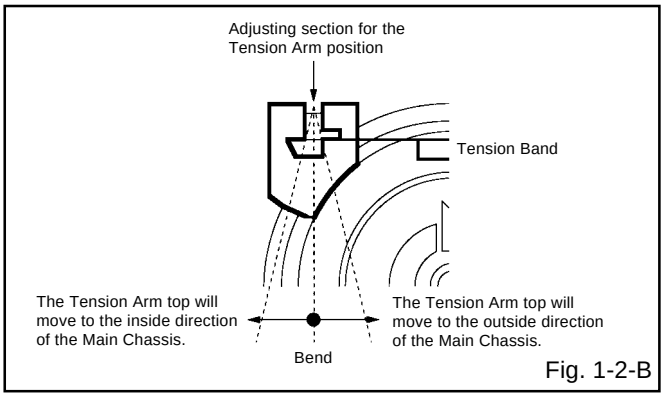


Fig. 1-2-B

1-3: CONFIRMATION OF PLAYBACK TORQUE AND BACK TENSION TORQUE DURING PLAYBACK

1. Load a video tape (T-120) recorded in standard speed mode. Set the unit to the PLAY mode.
2. Install the tentelometer (JG185) as shown in **Fig. 1-3**. Confirm that the meter indicates 20 ± 2gf in the beginning of playback.

• USING A CASSETTE TYPE TORQUE TAPE **(KT-300NR)**

1. After confirmation and adjustment of Tension Post position **(Refer to item 1-2)**, load the cassette type torque tape **(KT-300NR)** and set to the PLAY mode.
2. Confirm that the right meter of the torque tape indicates 50~90gf•cm during playback in SP mode.
3. Confirm that the left meter of the torque tape indicates 25~40gf•cm during playback in SP mode.

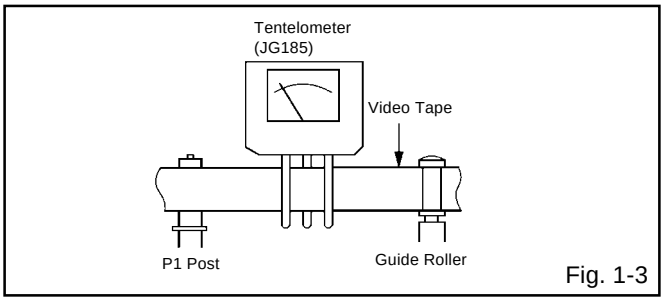


Fig. 1-3

MECHANICAL ADJUSTMENTS

1-4: CONFIRMATION OF VSR TORQUE

1. Install the Torque Gauge **(JG002F)** and Adapter **(JG002B)** on the S Reel. Set to the Picture Search (Rewind) mode. **(Refer to Fig.1-4-B)**
2. Then, confirm that it indicates 120~180gf•cm.

NOTE

Install the Torque Gauge on the reel disk firmly. Press the REW button to turn the reel disk.

1-5: CONFIRMATION OF REEL BRAKE TORQUE

(S Reel Brake) **(Refer to Fig. 1-4-B)**

1. Once set to the Fast Forward mode then set to the Stop mode. While, unplug the AC cord when the Pinch Roller Block is on the position of **Fig. 1-4-A**.
2. Move the Idler Ass'y from the S Reel.
3. Install the Torque Gauge **(JG002F)** and Adapter **(JG002B)** on the S Reel. Turn the Torque Gauge **(JG002F)** clockwise.
4. Then, confirm that it indicates 60~100gf•cm.

(T Reel Brake) **(Refer to Fig. 1-4-B)**

1. Once set to the Fast Forward mode then set to the Stop mode. While, unplug the AC cord when the Pinch Roller Block is on the position of **Fig. 1-4-A**.
2. Move the Idler Ass'y from the T Reel.
3. Install the Torque Gauge **(JG002E)** and Adapter **(JG002B)** on the T reel. Turn the Torque Gauge **(JG002E)** counterclockwise.
4. Then, confirm that it indicates 30~50gf•cm.

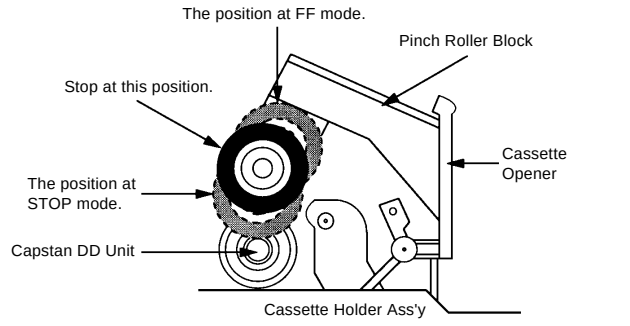


Fig. 1-4-A

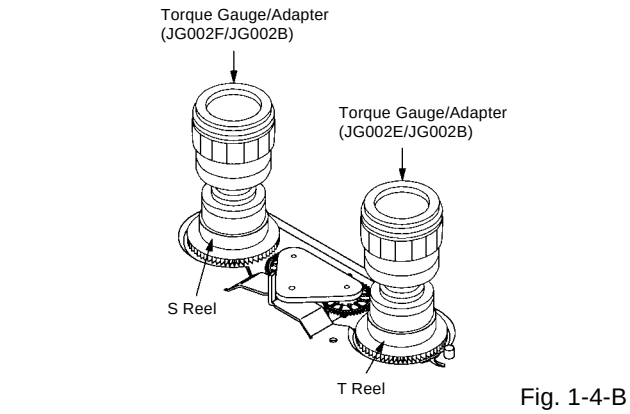


Fig. 1-4-B

NOTE

If the torque is out of the range, replace the following parts.

Check item	Replacement Part
1-4	Idler Ass'y/Clutch Ass'y
1-5	S Reel side: S Reel/Tension Band/Tension Connect/Tension Arm Ass'y T Reel side: T Reel/T Brake Band//T Brake Spring/T Brake Arm

2. CONFIRMATION AND ADJUSTMENT OF TAPE RUNNING MECHANISM

Tape Running Mechanism is adjusted precisely at the factory. Adjustment is not necessary as usual. When you replace the parts of the tape running mechanism because of long term usage or failure, the confirmation and adjustment are necessary.

2-1: GUIDE ROLLER

1. Playback the VHS Alignment Tape.
2. Connect CH-1 of the oscilloscope to **TP4501 (Envelope)** and CH-2 to **TP1002 (SW Pulse)**.
3. Press and hold the Digital Tracking button on the remote control more than 2 seconds to set tracking to center.
4. Trigger with SW Pulse and observe the envelope. **(Refer to Fig. 2-1-A)**
5. When observing the envelope, adjust the Taper Nut Driver slightly until the envelope will be flat.
   Even if you press the Tracking Button, adjust so that flatness is not moved so much.
6. Adjust so that the A : B ratio is better than 3 : 2 as shown in **Fig. 2-1-B**, even if you press the Tracking Button to move the envelope (The envelope waveform will begin to decrease when you press the Tracking Button).
7. Adjust the PG shifter during playback.
   (Refer to the ELECTRICAL ADJUSTMENTS)

NOTE

After adjustment, confirm and adjust A/C head.
(Refer to item 2-2)

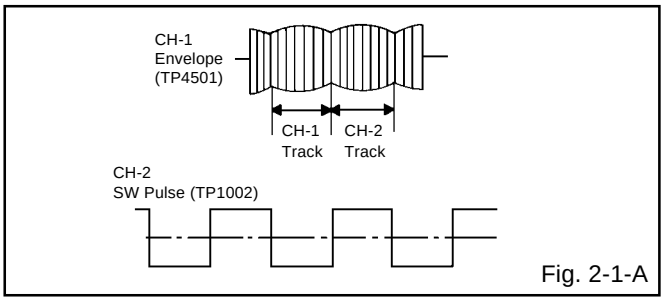


Fig. 2-1-A

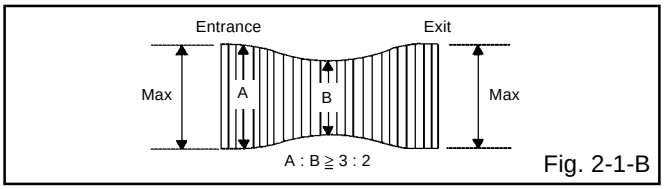


Fig. 2-1-B

MECHANICAL ADJUSTMENTS

2-2: CONFIRMATION AND ADJUSTMENT OF AUDIO/ CONTROL HEAD

When the Tape Running Mechanism does not work well, adjust the following items.

1. Playback the VHS Alignment Tape.
2. Confirm that the reflected picture of stamp mark is appeared on the tape prior to P4 Cap as shown in **Fig. 2-2-A**.
   a) When the reflected picture is distorted, turn the screw ① clockwise until the distortion is disappeared.
   b) When the reflected picture is not distorted, turn the screw ① counterclockwise until little distortion is appeared, then adjust the a).
3. Turn the screw ② to set the audio level to maximum.
4. Confirm that the bottom of the Audio/ Control Head and the bottom of the tape is shown in **Fig. 2-2-C**.
   c) When the height is not correct, turn the screw ③ to adjust the height. Then, adjust the 1~3 again.

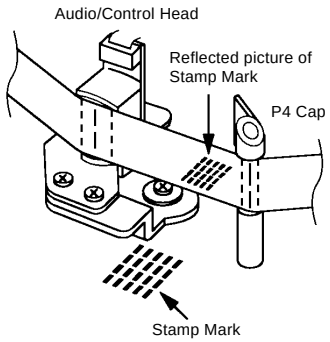


Fig. 2-2-A

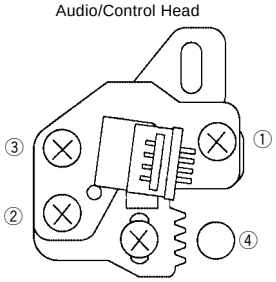


Fig. 2-2-B

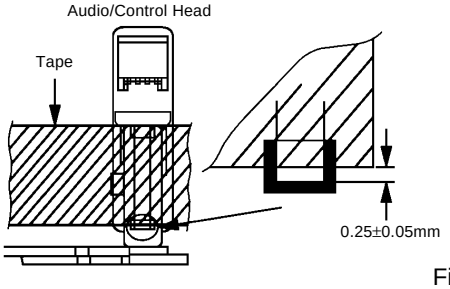


Fig. 2-2-C

2-3: TAPE RUNNING ADJUSTMENT (X VALUE ADJUSTMENT)

1. Confirm and adjust the height of the Reel Disk. **(Refer to item 1-1)**
2. Confirm and adjust the position of the Tension Post. **(Refer to item 1-2)**
3. Adjust the Guide Roller. **(Refer to item 2-1)**
4. Confirm and adjust the Audio/Control Head. **(Refer to item 2-2)**
5. Connect CH-1 of the oscilloscope to **TP1002**, CH-2 to **TP4501** and CH-3 to **HOT side of Audio Out Jack**.
6. Playback the VHS Alignment Tape.
7. Press and hold the Digital Tracking button on the remote control more than 2 seconds to set tracking to center.
8. Set the X Value adjustment driver **(JG153)** to the ④ of **Fig. 2-2-B**. Adjust X value so that the envelope waveform output becomes maximum. Check if the relation between Audio and Envelope waveform becomes (1) or (2) of **Fig. 2-3**.

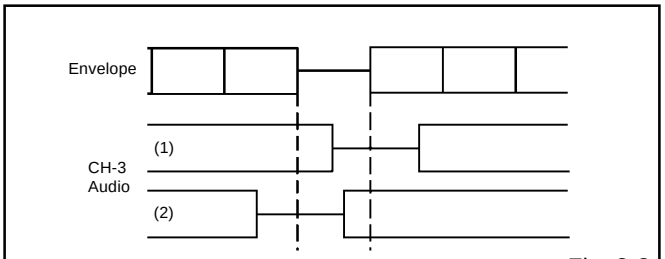
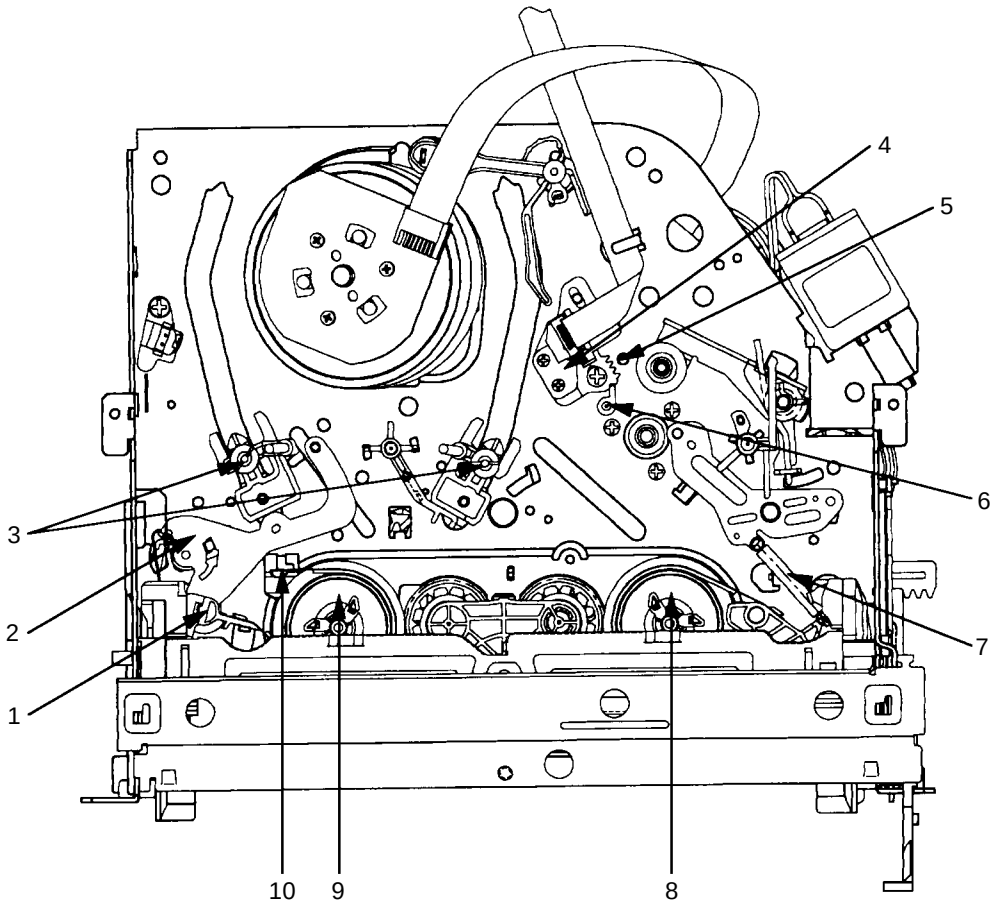


Fig. 2-3

MECHANICAL ADJUSTMENTS

3. MECHANISM ADJUSTMENT PARTS LOCATION GUIDE



1. Tension Connect
2. Tension Arm
3. Guide Roller
4. Audio/Control Head
5. X value adjustment driver hole
6. P4 Post
7. T Brake Spring
8. T Reel
9. S Reel
10. Adjusting section for the Tension Arm position

ELECTRICAL ADJUSTMENTS

1. BEFORE MAKING ELECTRICAL ADJUSTMENTS

Read and perform these adjustments when repairing the circuits or replacing electrical parts or PCB assemblies.

CAUTION

- Use an isolation transformer when performing any service on this chassis.
- Before removing the anode cap, discharge electricity because it contains high voltage.
- When removing a PCB or related component, after unfastening or changing a wire, be sure to put the wire back in its original position.
- When you exchange IC and Transistor for a heat sink, apply the silicon grease on the contact section of the heat sink. Before applying new silicon grease, remove all the old silicon grease. (Old grease may cause damages to the IC and Transistor).

Prepare the following measurement tools for electrical adjustments.

1. Oscilloscope
2. Digital Voltmeter
3. Multi-sound Generator
4. Pattern Generator

On-Screen Display Adjustment

1. Set the VOLUME to minimum.
2. Press the VOL. DOWN button on the set and the Channel button **(9)** on the remote control for more than 2 seconds to appear the adjustment mode on the screen as shown in **Fig. 1-1**.

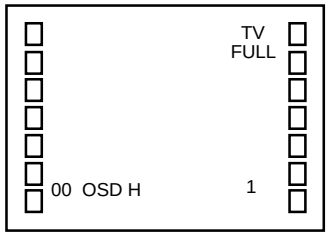


Fig. 1-1

3. Use the Channel UP/DOWN button or Channel button **(0-9)** on the remote control to select the options shown in **Fig. 1-2**.
4. Press the MENU button on the remote control to end the adjustments.
5. To display the adjustment screen for AV, CS and HD-MI mode, press the TV/VIDEO button on the remote control to set to the AV, CS and HD-MI mode. Press the VOL.DOWN button on the set and the channel **(9)** on the remote control for more than 2 seconds.

NO.	FUNCTION	NO.	FUNCTION	NO.	FUNCTION
00	OSD H	20	CORNER	40	R-Y PHASE
01	CUT OFF	21	C.PARA	41	G-Y GAIN
02	H.POSI	22	C.SAW	42	G-Y PHASE
03	V.POSI	23	V.SYMM	43	BRI.CENT
04	H. SIZE	24	R.BIAS	44	BRI.MAX
05	V. SIZE	25	G.BIAS	45	BRI.MIN
06	V. LIN	26	B.BIAS	46	CONT.CENT
07	V-EHT	27	R/G.DRV	47	CONT.MAX
08	H-EHT	28	B/R.DRV	48	CONT.MIN
09	V-BLK P	29	R.BIAS(C)	49	COL.CENT
10	V-BLK S	30	G.BIAS(C)	50	COL.MAX
11	V.CENT	31	B.BIAS(C)	51	COL.MIN
12	V.LIMIT	32	R/G.DRV(C)	52	SUB CONT
13	V.CORR	33	B/R.DRV(C)	53	TINT
14	V.S.CORR	34	R.BIAS(W)	54	SHARP.CENT
15	EW PARA	35	G.BIAS(W)	55	SHARP.MAX
16	TRAPEZIUM	36	B.BIAS(W)	56	SHARP.MIN
17	COR.TOP	37	R/G.DRV(W)	57	TILT.CENT
18	COR.BTM	38	B/R.DRV(W)	58	TEST STEREO
19	S.CORR	39	R-Y GAIN	59	TEST AUDIO

Fig. 1-2

2. BASIC ADJUSTMENTS (VCR SECTION)

2-1: PG SHIFTER

1. Connect CH-1 on the oscilloscope to **TP1002** and CH-2 to **CP103**.
2. Playback the alignment tape.
3. Press both VOL. DOWN button on the set and the Channel button **(5)** on the remote control for more than 2 seconds to set tracking to center.
4. Press the VOL. DOWN button on the set and the channel button **(3)** on the remote control for more than 2 seconds until the indicator REC disappears. If the indicator REC disappears, adjustment is completed.

(If the above adjustments doesn't work well:)

5. Press the VOL. DOWN button on the set and the channel button **(3)** on the remote control for more than 2 seconds until the indicator REC disappears.
6. When the REC indicator is blinking, press both VOL. DOWN button on the set and the channel button **(4)** on the remote control for more than 2 seconds and adjust the Tracking +/- button until the arising to the down of Head Switching Pulse becomes 6.5 ± 0.5H.
(Refer to Fig. 2-1-A, B)

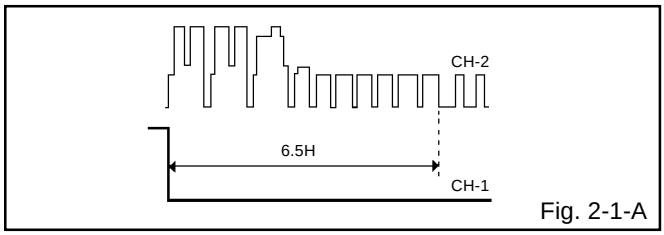


Fig. 2-1-A

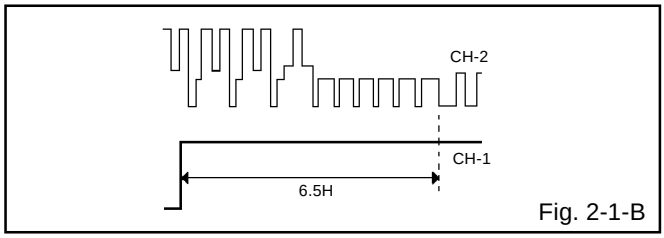


Fig. 2-1-B

ELECTRICAL ADJUSTMENTS

2-2: CUT OFF

1. Place the set in Aging Test for more than 15 minutes.
2. Place the set in AV MODE without signal.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(01)** on the remote control to select "CUT OFF".
5. Adjust the **Screen Volume** until a dim raster is obtained.

2-3: WHITE BALANCE

NOTE: Adjust after performing CUT OFF adjustment.

1. Place the set in Aging Test for more than 15 minutes.
2. Receive the gray scale pattern from the Pattern Generator.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(24)** on the remote control to select “R.BIAS”.
5. Press the CH. UP/DOWN button on the remote control to select the “R.BIAS”, “G.BIAS”, “B.BIAS”, “R/G.DRV”, “B/R.DRV”, “R.BIAS(C)”, “G.BIAS(C)”, “B.BIAS(C)”, “R/G.DRV(C)”, “B/R.DRV(C)”, “R.BIAS(W)”, “G.BIAS(W)”, “B.BIAS(W)”, “R/G.DRV(W)” or “B/R.DRV(W)”.
6. Adjust the VOL. UP/DOWN button on the remote control to whiten the R.BIAS(C), G.BIAS(C), B.BIAS(C), R/G.DRV(C), B/R.DRV(C), R.BIAS(W), G.BIAS(W), B.BIAS(W), R/G.DRV(W) and B/R.DRV(W) at each step tone sections equally.
7. Perform the above adjustments 5 and 6 until the white color is achieved.

2-4: DOUBLE FOCUS

1. Receive the cross hatch signal from the Pattern Generator.
2. Turn the **F1 VR** and **F2 VR** fully clockwise once. **(Refer to Fig. 2-2)**
3. Adjust the **F1 VR** so that the screen becomes clearest. Then adjust the **F2 VR**.

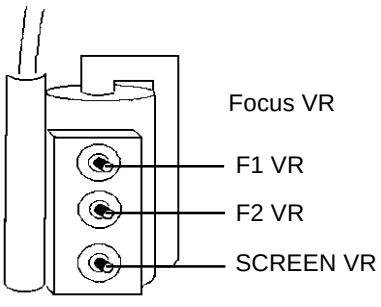


Fig. 2-2

2-5: OSD POSITION

1. Receive the monoscope pattern from the Pattern Generator.
2. Using the remote control, set the brightness and contrast to normal position.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(00)** on the remote control to select "OSD H".
4. Press the LEFT/RIGHT button on the remote control until the difference of A and B becomes minimum. **(Refer to Fig. 2-3)**

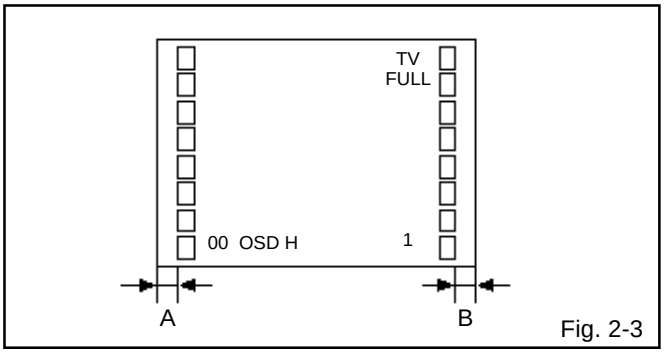


Fig. 2-3

2-6: HORIZONTAL POSITION/ HORIZONTAL SIZE

1. Receive the monoscope pattern.
2. Press the MENU button. And, then press the LEFT/RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(02)** on the remote control to select "H.POSI".
7. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes becomes minimum.
8. Receive the monoscope pattern.
9. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(04)** on the remote control to select “H. SIZE”.
10. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on right and left becomes 7.5%.

ELECTRICAL ADJUSTMENTS

2-7: VERTICAL CENT/ VERTICAL SIZE

1. Receive the monoscope pattern.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(11)** on the remote control to select “V. CENT”.
8. Press the VOL. UP/DOWN button on the remote control until the horizontal line becomes fit to the notch of the shadow mask.
9. Receive the monoscope pattern.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(05)** on the remote control to select “V. SIZE”.
11. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8%.

2-8: VERTICAL LINEARITY

NOTE: Adjust after performing adjustments in section 2-6. After the adjustment of Vertical Linearity, reconfirm the Vertical Position and Vertical Size adjustments.

1. Receive the monoscope pattern.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(06)** on the remote control to select “V. LIN”.
8. Press the VOL. UP/DOWN button on the remote control until the SHIFT quantity of the OVER SCAN on upside and downside becomes 8%.

2-9: BRIGHT CENT

1. Receive the monoscope pattern. (RF Input)
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(43)** on the remote control to select "BRI CENT".
5. Press the VOL. UP/DOWN button on the remote control until the white 2.7% is starting to be visible
6. Receive the monoscope pattern. (Audio Video Input)
7. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~5.
8. Receive the monoscope pattern.
9. Press the TV/VIDEO button on the remote control to set to the CS mode.Then perform the above adjustments 2~5.
10. Receive the monoscope pattern.
11. Press the TV/VIDEO button on the remote control to set to the HD-MI mode.Then perform the above adjustments 2~5.

2-10: SUB CONTRAST

1. Set the screen mode to FULL.
2. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(52)** on the remote control to select "SUB CONT".
3. Check if the step No. SUB CONT is "17".
4. Receive a broadcast and check if the picture is normal.
5. Press the TV/VIDEO button on the remote control to set to the AV mode.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(52)** on the remote control to select "SUB CONT".
7. Check if the step No. SUB CONT is "16".
8. Receive a broadcast and check if the picture is normal.
9. Press the TV/VIDEO button on the remote control to set to the CS mode.
10. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(52)** on the remote control to select "SUB CONT".
11. Check if the step No. SUB CONT is "14".
12. Receive a broadcast and check if the picture is normal. Press the TV/VIDEO button on the remote control to set to the HD-MI mode.Then perform the above adjustments 2~4.
13. Receive a broadcast and check if the picture is normal.

ELECTRICAL ADJUSTMENTS

2-11: E/W PARA

1. Receive the crosshatch signal from the Pattern Generator.
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(15)** on the remote control to select “E W PARA”.
5. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines become straight.
6. Set the screen mode to 16:9.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-12: TRAPEZIUM

1. Receive the crosshatch signal from the Pattern Generator.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Using the remote control, set the brightness and contrast to normal position.
7. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(16)** on the remote control to select “TRAPEZIUM”.
8. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-13: COR TOP/BTM

1. Receive the crosshatch signal from the Pattern Generator.
2. Set the screen mode to FULL.
3. Using the remote control, set the brightness and contrast to normal position.
4. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(17)** on the remote control to select “COR. TOP”.
5. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines become straight.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(18)** on the remote control to select “COR. BTM”.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-14: CENSOR SAW

1. Receive the crosshatch signal from the Pattern Generator.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(22)** on the remote control to select “C.SAW”.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines of the screen become parallel.

2-15: CENSOR PARA

1. Receive the crosshatch signal from the Pattern Generator.
2. Press the MENU button. And, then press the LEFT/ RIGHT button on the remote control until the PICTURE menu appears.
3. Press the LEFT/RIGHT button on the remote control to highlight DISPLAY FORMAT.
4. Press the LEFT/RIGHT button on the remote control to select 1080i.
5. Set the screen mode to FULL.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(21)** on the remote control to select “C.PARA”.
7. Press the VOL. UP/DOWN button on the remote control until the both ends vertical lines become straight.

2-16: TINT/COLOR CENT

1. Receive the color bar pattern.
2. Connect the oscilloscope to **TP806**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(53)** on the remote control to select "TINT".
4. Press the VOL. UP/DOWN button on the remote control until the section "A" becomes as straight line. **(Refer to Fig. 2-4)**
5. Connect the oscilloscope to **TP805**.
6. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(49)** on the remote control to select "COL.CENT".
7. Press the VOL. UP/DOWN button on the remote control until the red color level is adjusted to 120 ± 10% of the white level. **(Refer to Fig. 2-5)**
8. Please check whether the waveform of **TP806** is straight line. If is not a straight line, adjust to TINT again.
9. Receive the color bar pattern. (Audio Video Input)
10. Press the TV/VIDEO button on the remote control to set to the AV mode. Then perform the above adjustments 2~8.
11. Receive the color bar pattern.
12. Press the TV/VIDEO button on the remote control to set to the CS mode. Then perform the above adjustments 2~8.
13. Receive the color bar pattern.
14. Press the TV/VIDEO button on the remote control to set to the HD-MI mode. Then perform the above adjustments 2~8.

ELECTRICAL ADJUSTMENTS

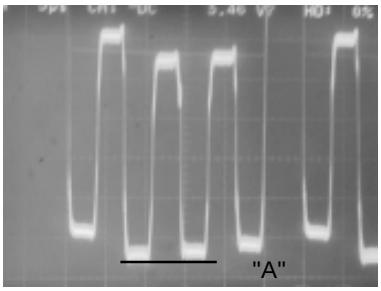


Fig. 2-4

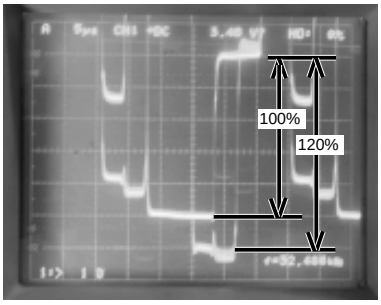


Fig. 2-5

2-17: TINT

1. Press the TV/VIDEO button on the remote control to set to the DVD mode.
2. Connect the oscilloscope to **TP806**.
3. Activate the adjustment mode display of **Fig. 1-1** and press the channel button **(53)** on the remote control to select "TINT".
4. Press the VOL. UP/DOWN button on the remote control until the section "A" becomes as straight line.
   (Refer to Fig. 2-6)

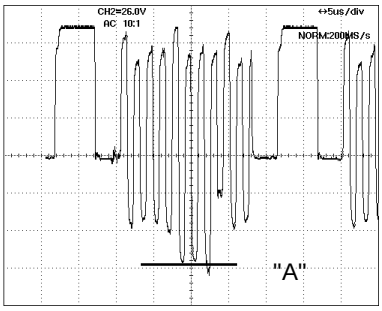


Fig. 2-6

2-18: Confirmation of Fixed Value (step No.)

Please check if the fixed values of the each adjustment items are set correctly referring below.

NO.	FUNCTION	TV	AV	DVD	CS	HD-MI
03	V.POSI	01	01	01	01	01
07	V-EHT	04	04	04	04	04
08	H-EHT	04	04	04	04	04
09	V-BLK P	31	31	31	31	31
10	V.BLK S	00	00	00	00	00
12	V.LIMIT	00	00	00	00	00
13	V.CORR	02	02	02	02	02
14	V.S.CORR	30	30	30	30	30
19	S.CORR	16	16	16	16	16
20	CORNER	21	21	21	21	21
23	V.SYMM	128	128	128	128	128
39	R-Y GAIN	08	08	08	08	08
40	R-Y PHASE	03	03	03	03	03
41	G-Y GAIN	05	05	05	05	05
42	G-Y PHASE	00	00	00	00	00
44	BRI.MAX	210	210	210	240	240
45	BRI.MIN	100	100	100	100	100
46	CONT.CENT	50	50	50	50	50
47	CONT.MAX	80	80	80	80	80
48	CONT.MIN	20	20	20	20	20
50	COL.MAX	100	100	110	110	110
51	COL.MIN	00	00	00	00	00
54	SHARP.CENT	55	55	40	55	55
55	SHARP.MAX	100	100	60	100	100
56	SHARP.MIN	00	00	00	00	00
57	TILT.CENT	00	00	00	00	00
58	TEST STEREO	00	00	00	00	00
59	TEST AUDIO	00	00	00	00	00

ELECTRICAL ADJUSTMENTS

3. PURITY AND CONVERGENCE ADJUSTMENTS

NOTE

1. Turn the unit on and let it warm up for at least 30 minutes before performing the following adjustments.
2. Place the CRT surface facing east or west to reduce the terrestrial magnetism.
3. Turn ON the unit and demagnetize with a Degauss Coil.

3-1: STATIC CONVERGENCE (ROUGH ADJUSTMENT)

1. Tighten the screw for the magnet. Refer to the adjusted CRT for the position. **(Refer to Fig. 3-1)**
   If the deflection yoke and magnet are in one body, untighten the screw for the body.
2. Receive the green raster pattern from the color bar generator.
3. Slide the deflection yoke until it touches the funnel side of the CRT.
4. Adjust center of screen to green, with red and blue on the sides, using the pair of purity magnets.
5. Switch the color bar generator from the green raster pattern to the crosshatch pattern.
6. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
7. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.
8. Adjust the crosshatch pattern to change to white by repeating steps 6 and 7.

3-2: PURITY

NOTE

Adjust after performing adjustments in section 3-1.

1. Receive the green raster pattern from color bar generator.
2. Adjust the pair of purity magnets to center the color on the screen.
   Adjust the pair of purity magnets so the color at the ends are equally wide.
3. Move the deflection yoke backward (to neck side) slowly, and stop it at the position when the whole screen is green.
4. Confirm red and blue color.
5. Adjust the slant of the deflection yoke while watching the screen, then tighten the fixing screw.

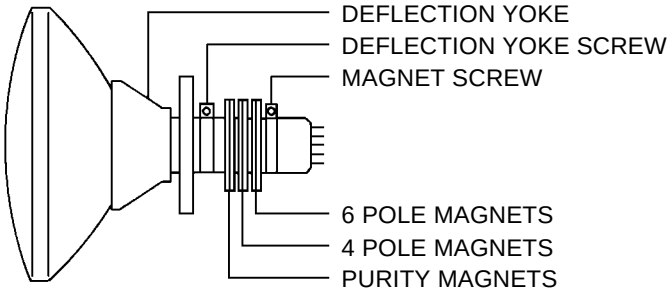


Fig. 3-1

3-3: STATIC CONVERGENCE

NOTE

Adjust after performing adjustments in section 3-2.

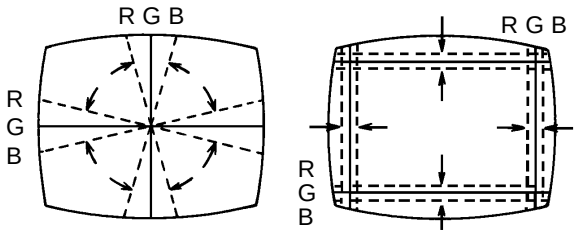
1. Receive the crosshatch pattern from the color bar generator.
2. Combine red and blue of the 3 color crosshatch pattern on the center of the screen by adjusting the pair of 4 pole magnets.
3. Combine red/blue (magenta) and green by adjusting the pair of 6 pole magnets.

3-4: DYNAMIC CONVERGENCE

NOTE

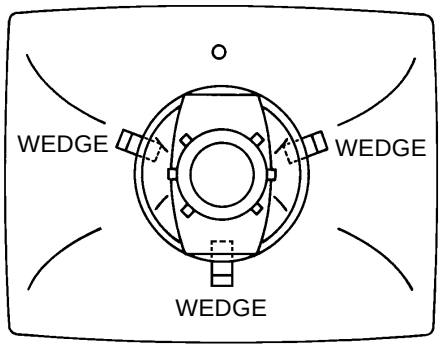
Adjust after performing adjustments in section 3-3.

1. Adjust the differences around the screen by moving the deflection yoke upward/downward and right/left. **(Refer to Fig. 3-2-a)**
2. Insert three wedges between the deflection yoke and CRT funnel to fix the deflection yoke. **(Refer to Fig. 3-2-b)**



UPWARD/DOWNWARD SLANT RIGHT/LEFT SLANT

Fig. 3-2-a

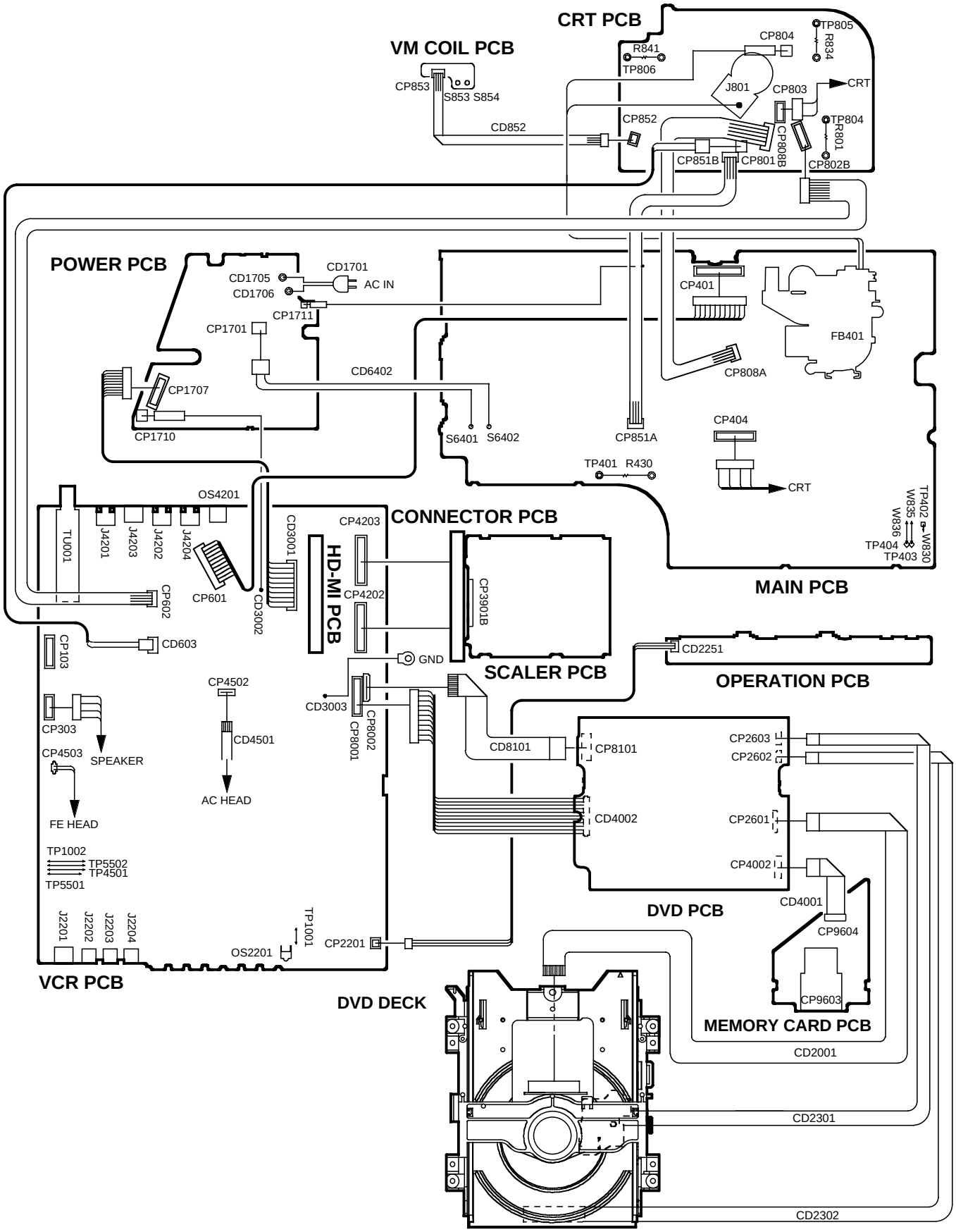


WEDGE POSITION

Fig. 3-2-b

ELECTRICAL ADJUSTMENTS

4. ELECTRICAL ADJUSTMENT PARTS LOCATION GUIDE (WIRING CONNECTION)



DVD BLOCK DIAGRAM

FROM/TO MEMORY CARD BLOCK

CP4002
52975-2492

1	VCC33	
2	HD3	HD3
3	HD4	HD4
4	HD5	HD5
5	HD6	HD6
6	HD7	HD7
7	FCUIF31	FCUIF31
8	FCUIF35	FCUIF35
9	GND	
10	RD	RD
11	WR	WR
12	GND	
13	FCUIF32	FCUIF32
14	FCUIF36	FCUIF36
15	HA1	HA1
16	GND	
17	HA0	HA0
18	HD0	HD0
19	HD1	HD1
20	HD2	HD2
21	SW-WP	HDIO-FC1
22	FCUIF34	FCUIF34
23	FCUIF37	FCUIF37
24	CARD_DETECT	V7IO-FC

FLASH 16M
IC4007
SST39VF1601-70-4C-EKE

SDRAM 64M
IC4005
HY57V641620HGTP-7

SW
IC4006
SN74CBT3257PWR

SER FLSH

SW
IC4010
SN74CBT3257PWR

HD0~HD15
HA0~HA19

SDA0~SDA11
SDD0~SDD15

DVD LOADER
DM3P(05SD)

Pick up

Spindle Moter
Loading Moter

Sled Moter

HOME

RFA_SDEN,SDATA,VR_SEL

MIRR,DEFECT

SPDL SENS

A,B,C,D,E,F
RF
CD,DVD,LD

READ CHANNEL
IC2601
ZR36708TQC

RFA_SCLK
AAF_CE,FE,TE,PI
FNN,FNP
VBIASS0,S1
LINK,LDON

TIN SW ,TOUT SW

TR+/-,FO+/-
SPDL+/-,SLED+/-

Moter Driver
IC2301
LA6565

SPINDLE,SLED_PWM
TRACK,FOCUS_PWM
ADC IN 5,6,7
S MUTE

MPEG Decoder
W/Video Encorder
W/u-CON
W/DSP
IC4001
ZR36778HQCG
(VADDIS7)

1.9V
3.3V

DAC B,C,D

REG+3.3V/+1.9V
IC4003
BA33E00WHFP

VIDEO BUFFER
Q8102~Q8104

I2CLK
I2DAT

EEPROM
IC4002
BR24L02F-WE2

ASDATA0
AMCLK
ABCLK
ALRCLK

STEREO DAC
IC8502
PCM1753DBQR

DVD AUDIO R
DVD AUDIO L

FROM/TO TV BLOCK

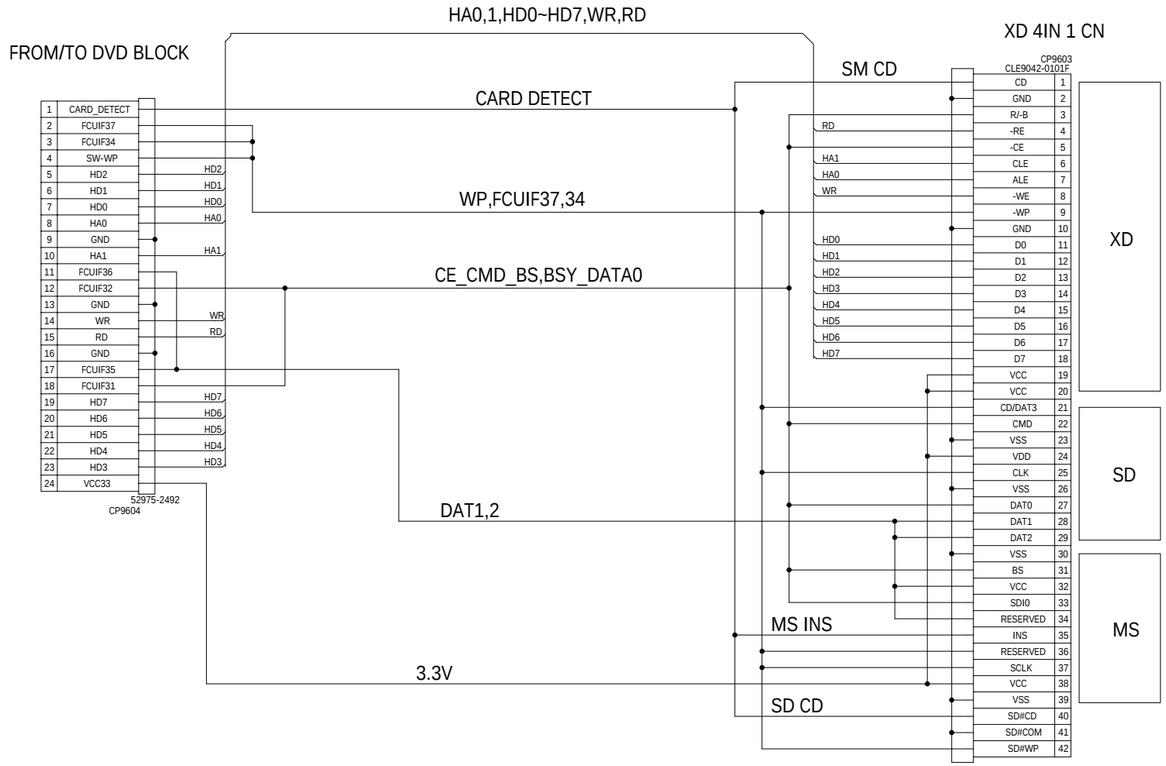
CD4002
CU2B2201

GND(D)	1
GND(D)	2
TX	3
RX	4
GND(M)	5
P.CON+9V	6
P.CON+A5V	7
UNREG+3.8V	8
UNREG+3.8V	9
GND(A)	10
SPDIF	11

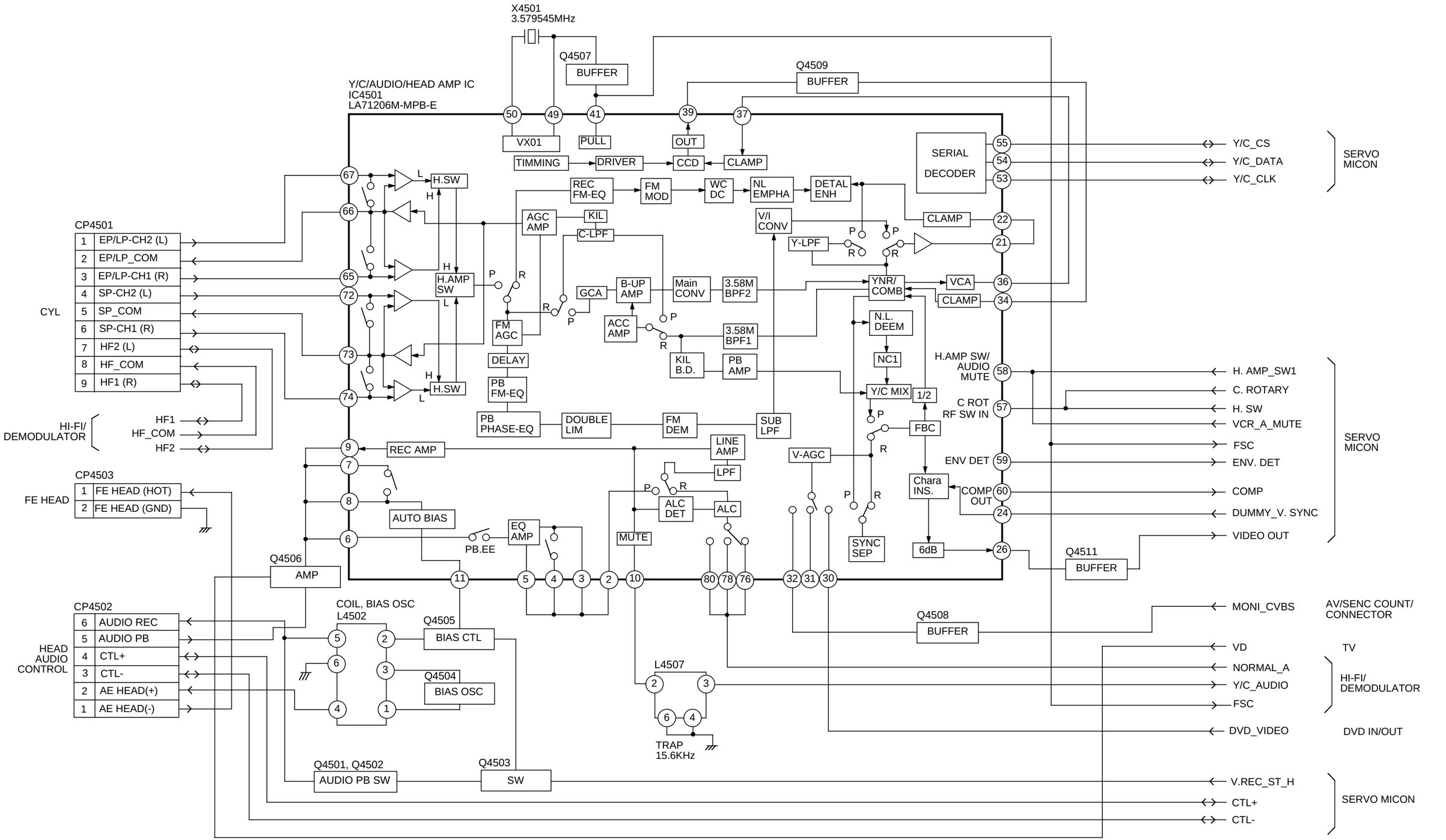
CP8101_3 IMSA-9604S-12Z13

DVD-H (GND)	12
DVD RESET	11
ZERO	10
AUDIO-R	9
GND	8
AUDIO-L	7
GND	6
Y	5
GND	4
C	3
GND	2
CVBS	1

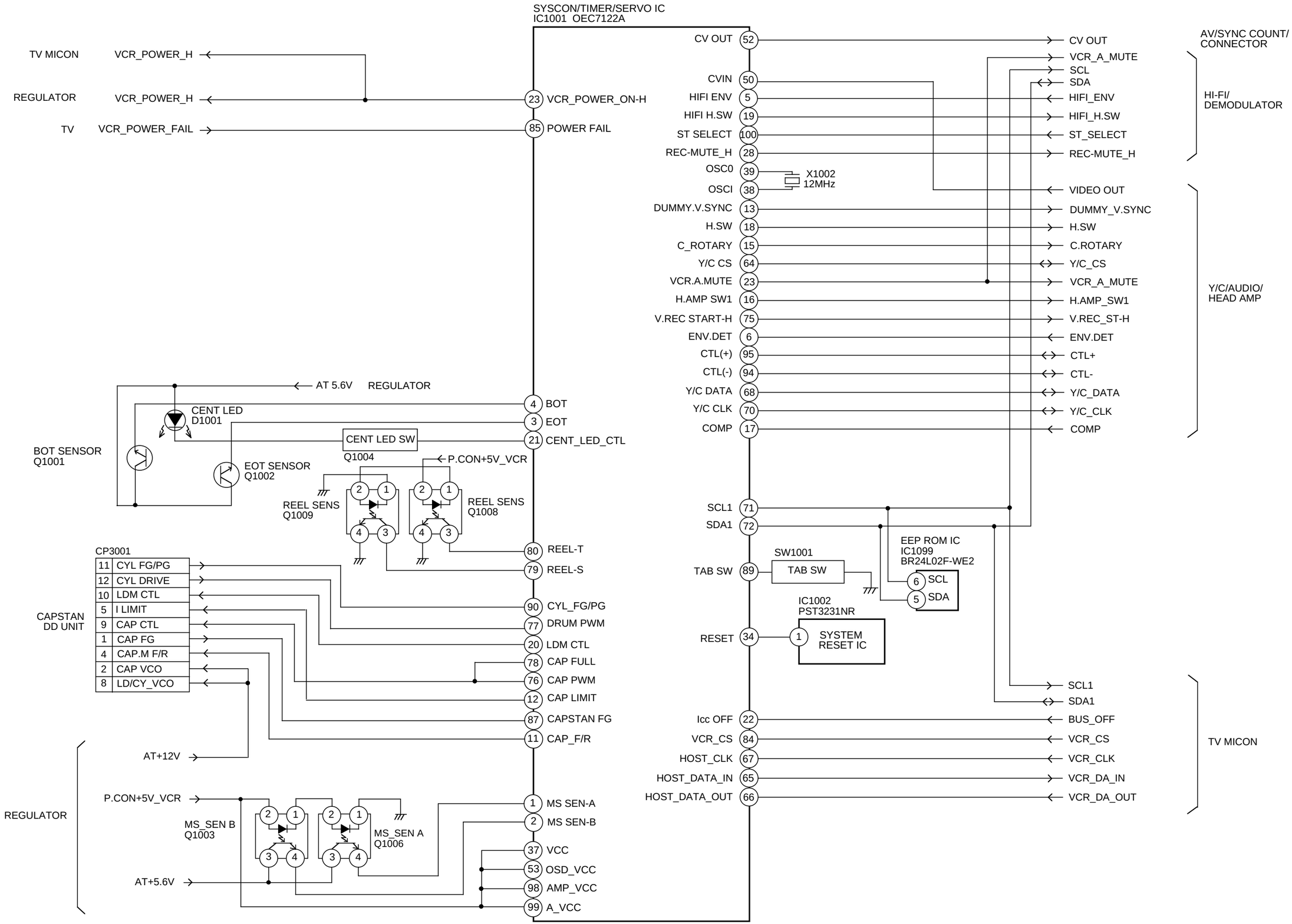
MEMORY CARD BLOCK DIAGRAM



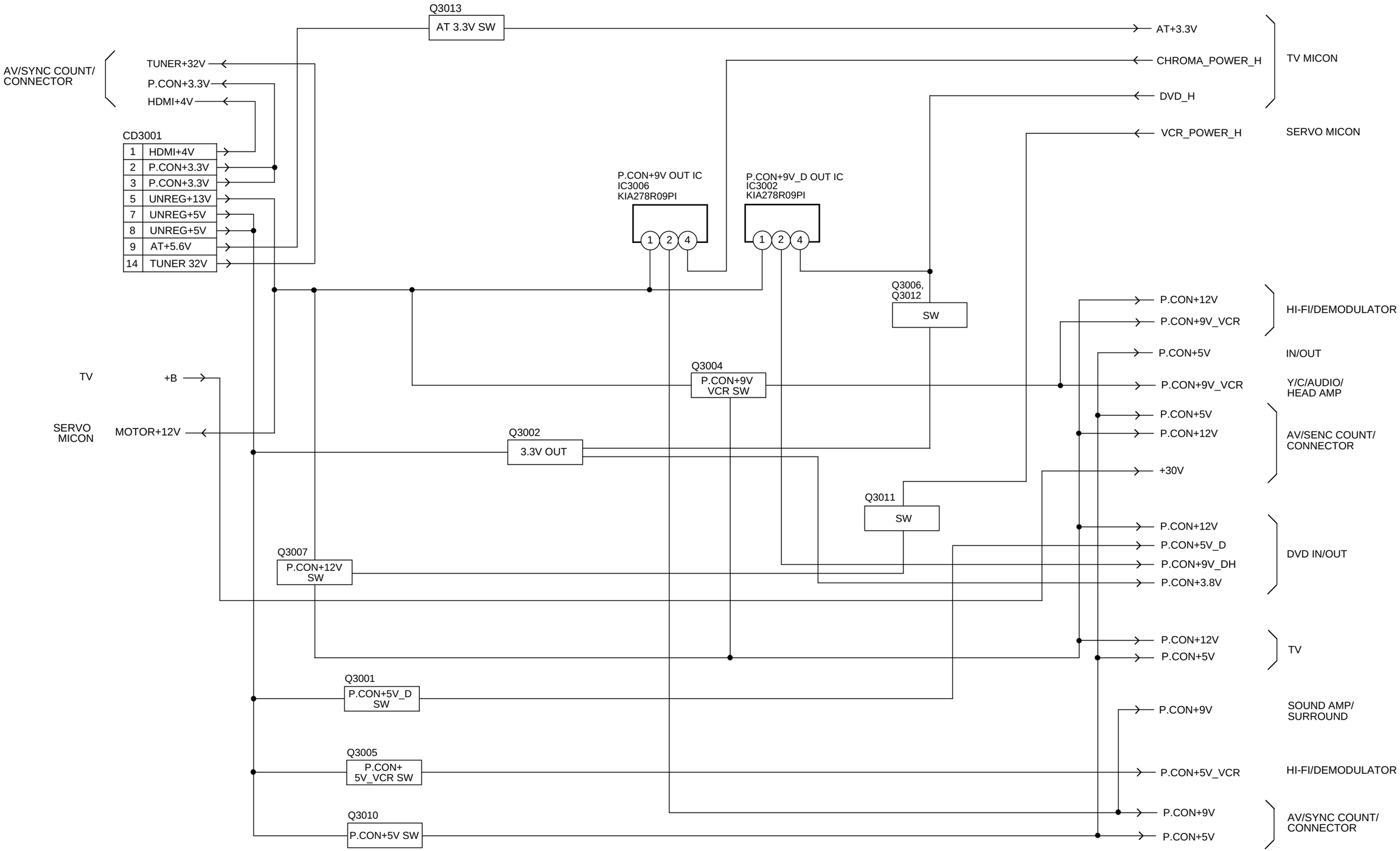
Y/C/AUDIO/HEAD AMP BLOCK DIAGRAM



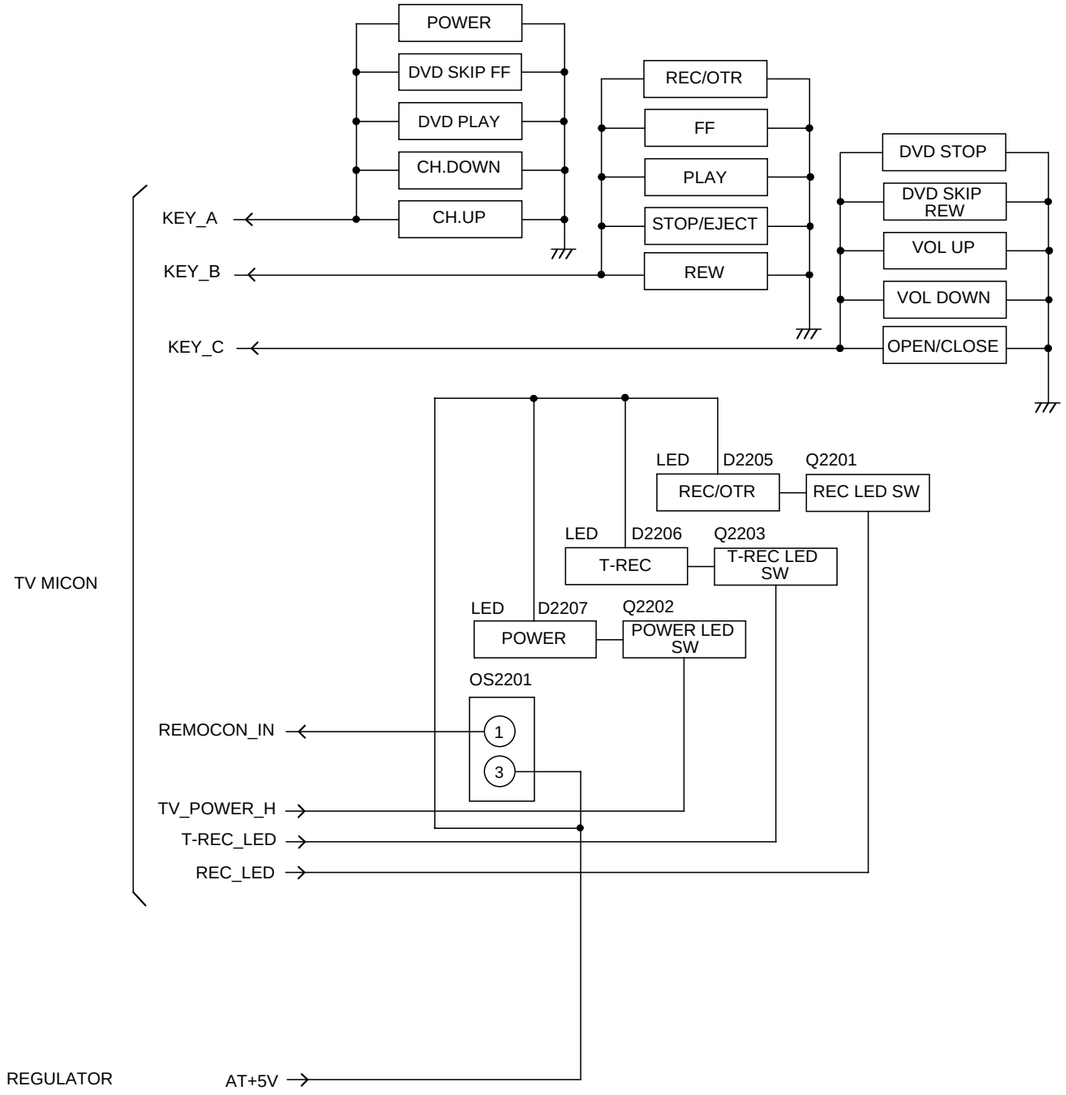
SERVO MICON BLOCK DIAGRAM



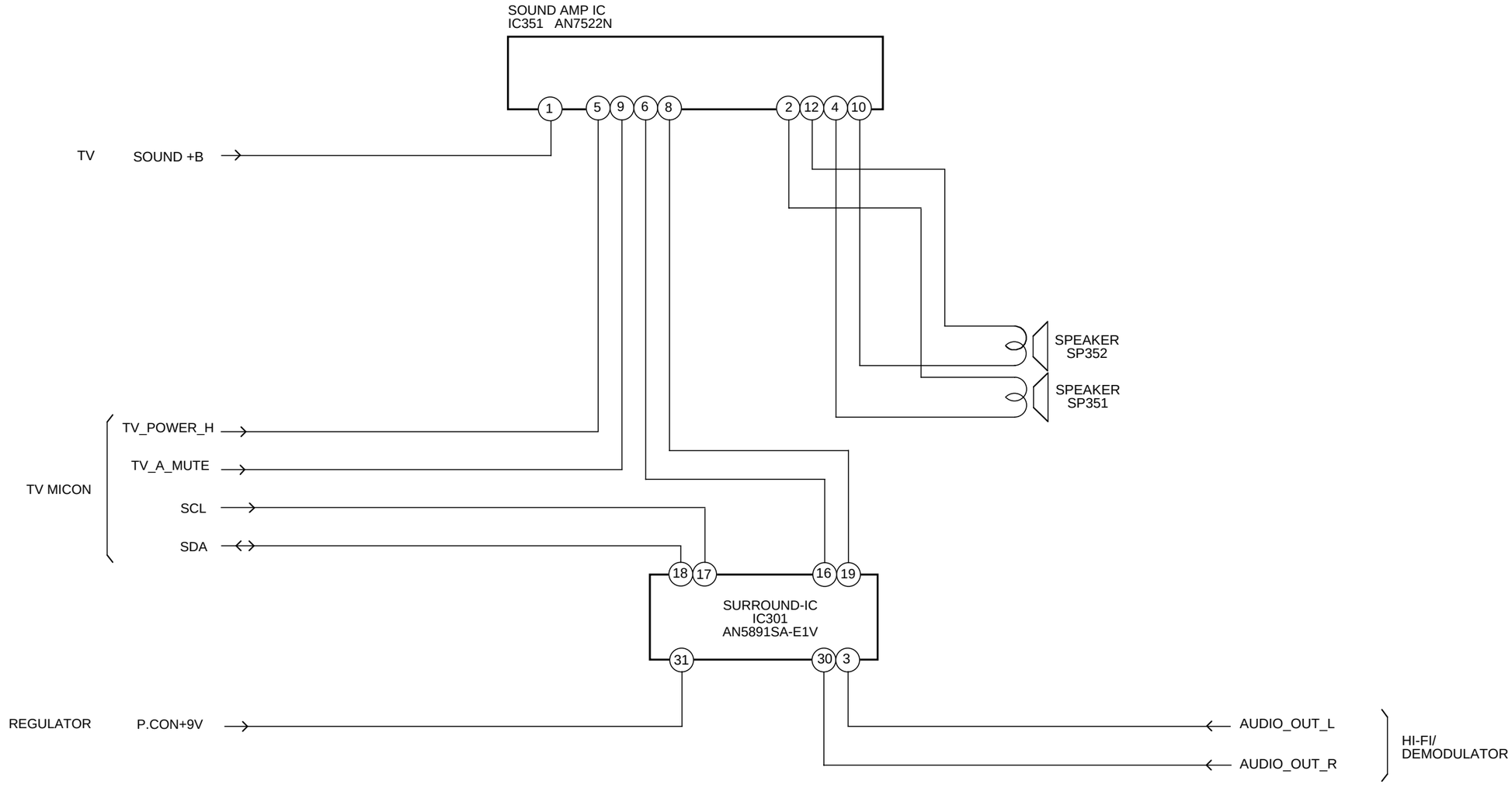
REGULATOR BLOCK DIAGRAM



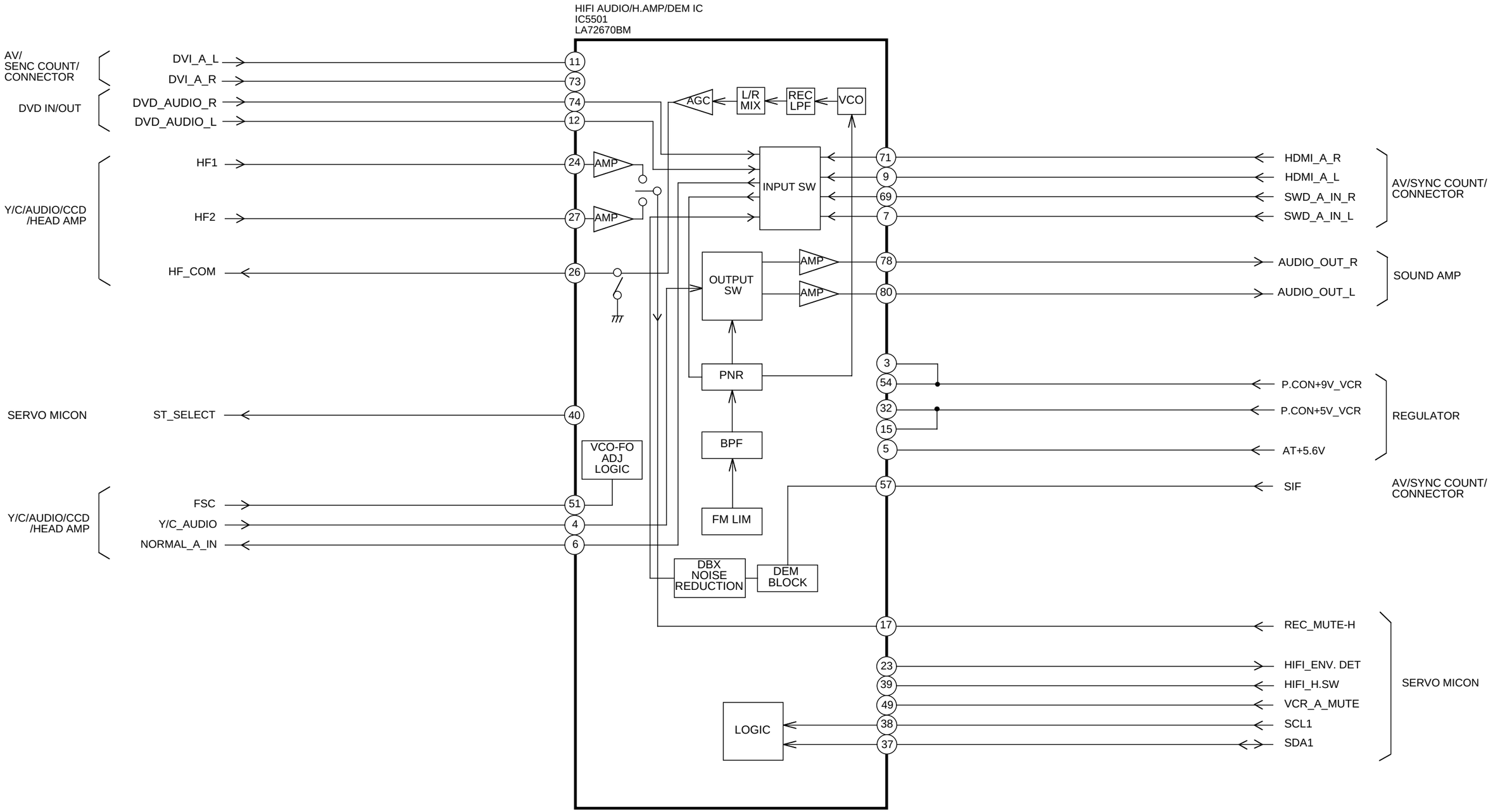
IN/OUT BLOCK DIAGRAM



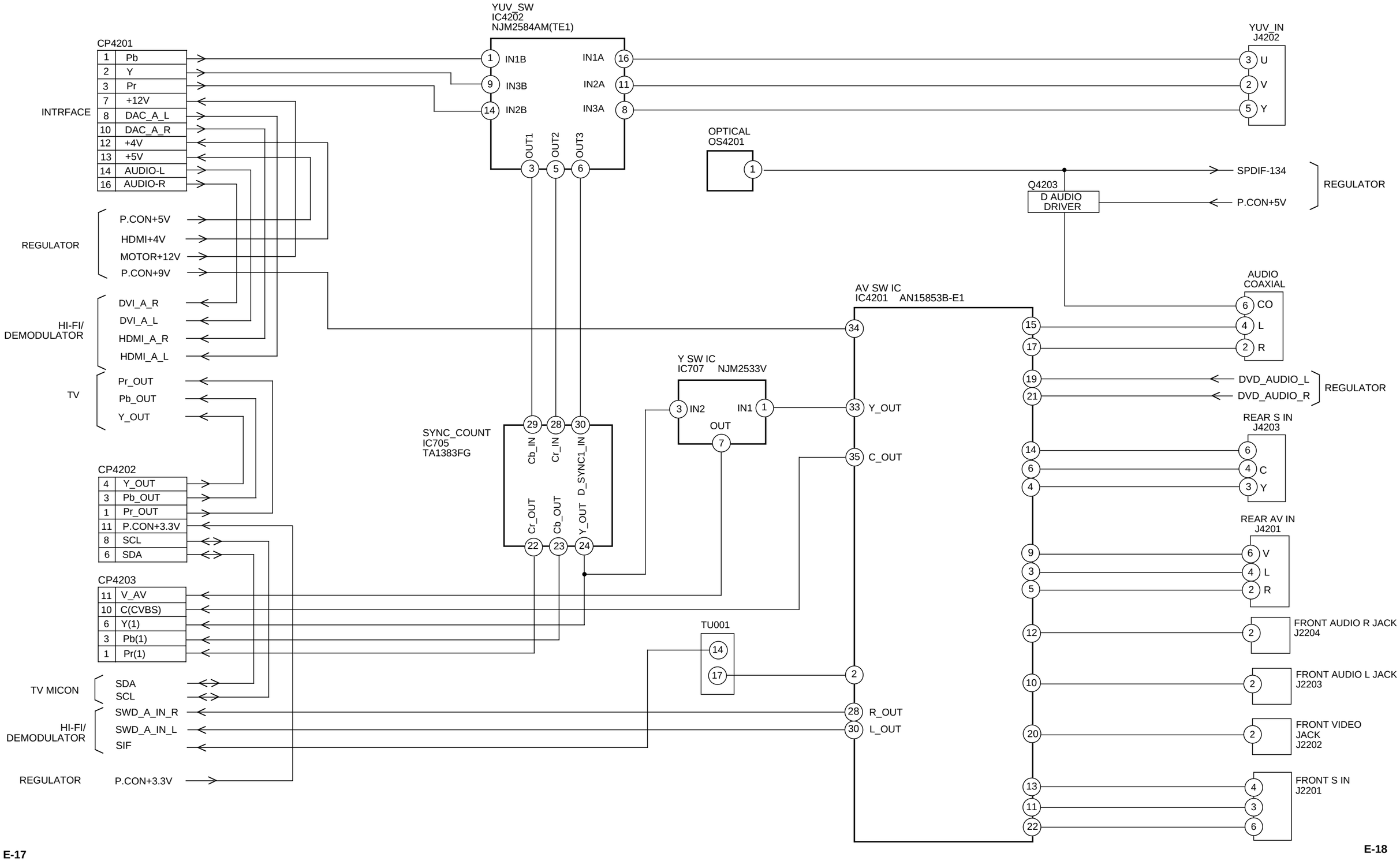
SOUND AMP/SURROUND BLOCK DIAGRAM



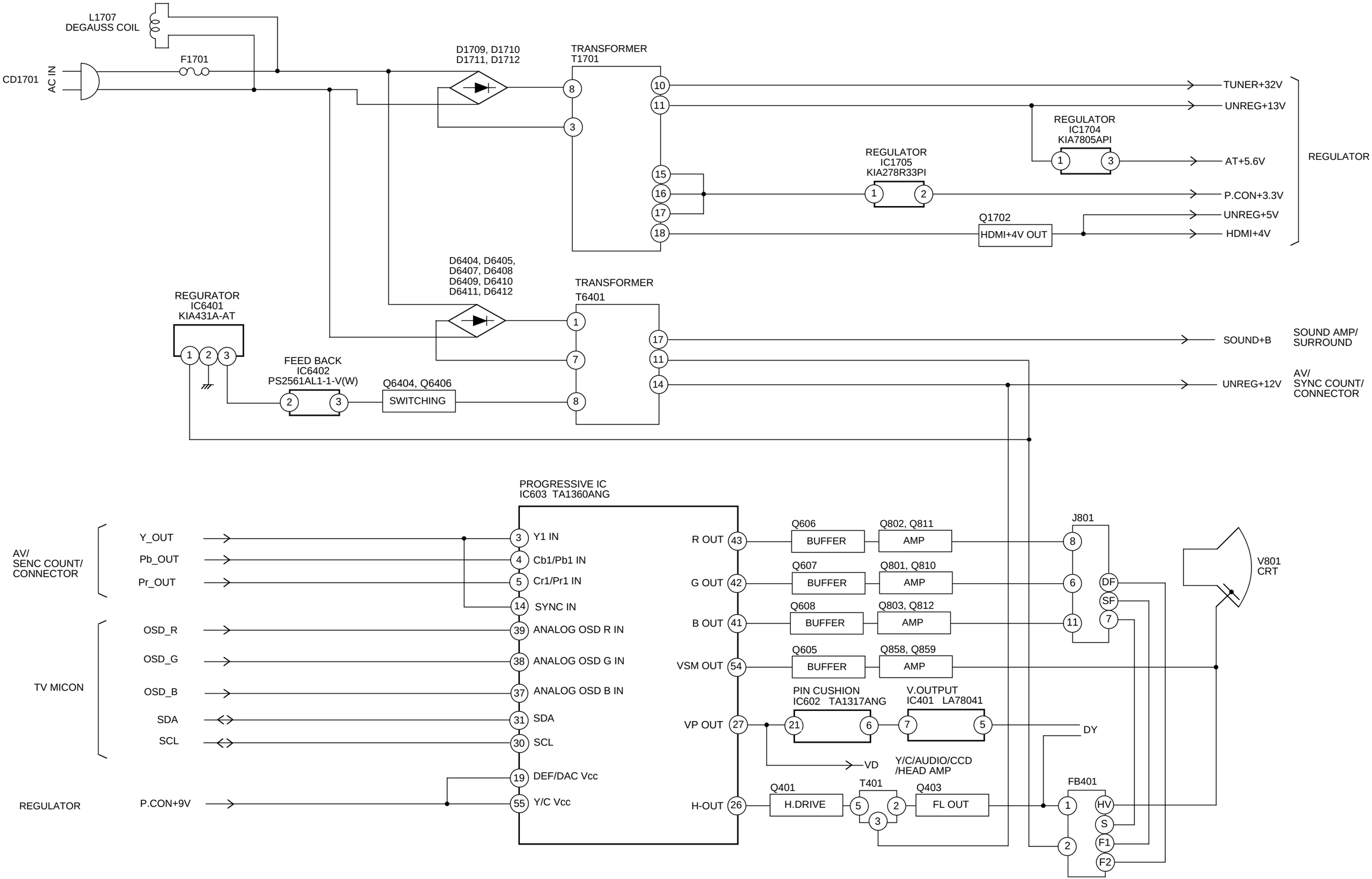
Hi-Fi/DEMODULATOR BLOCK DIAGRM



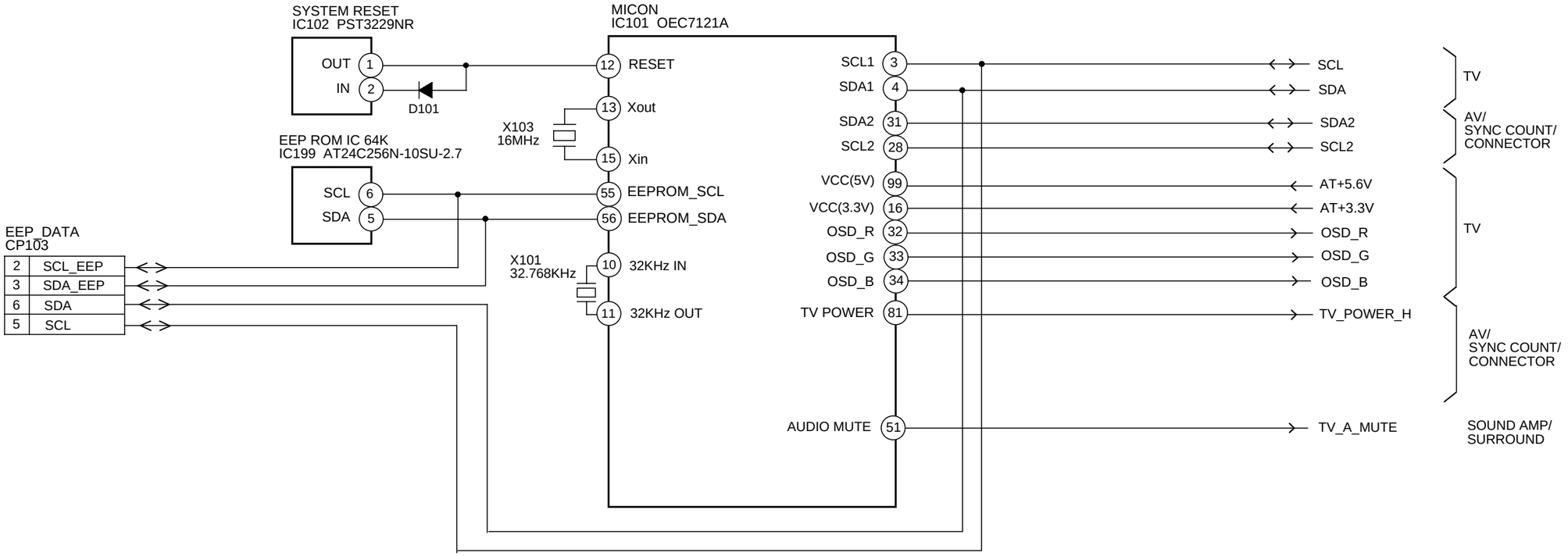
AV/SYNC COUNT/CONNECTOR BLOCK DIAGRM



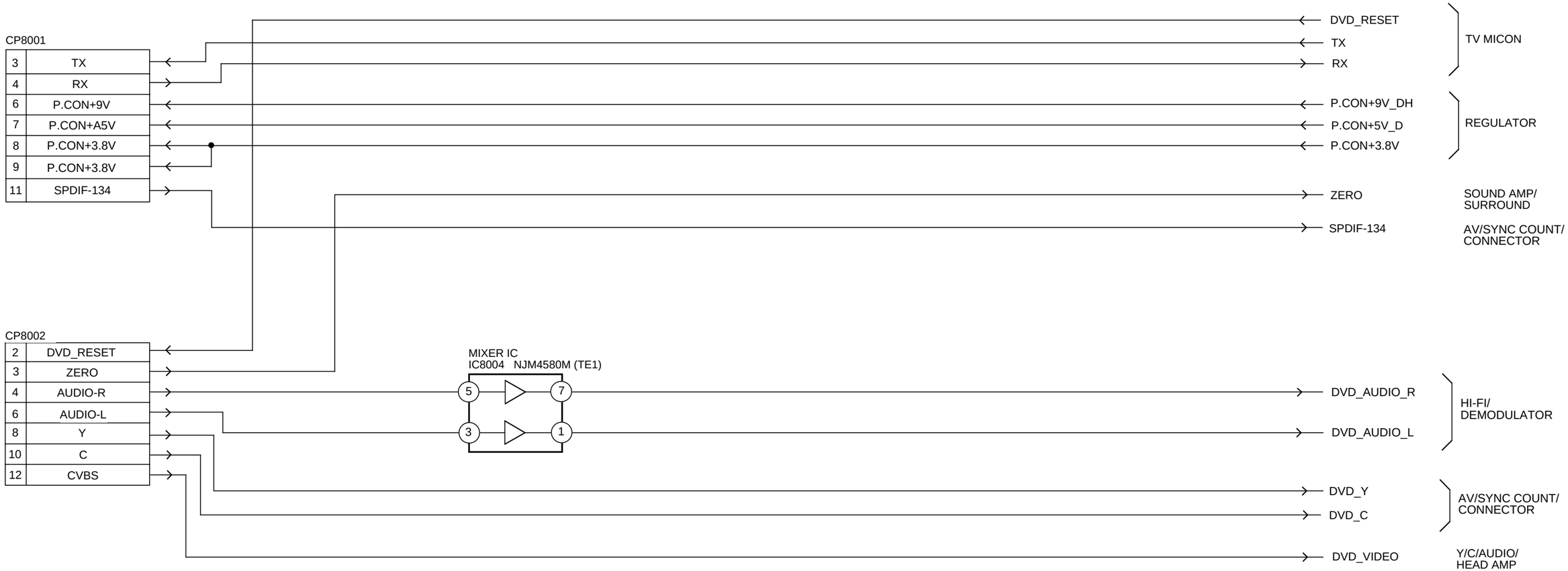
TV BLOCK DIAGRAM



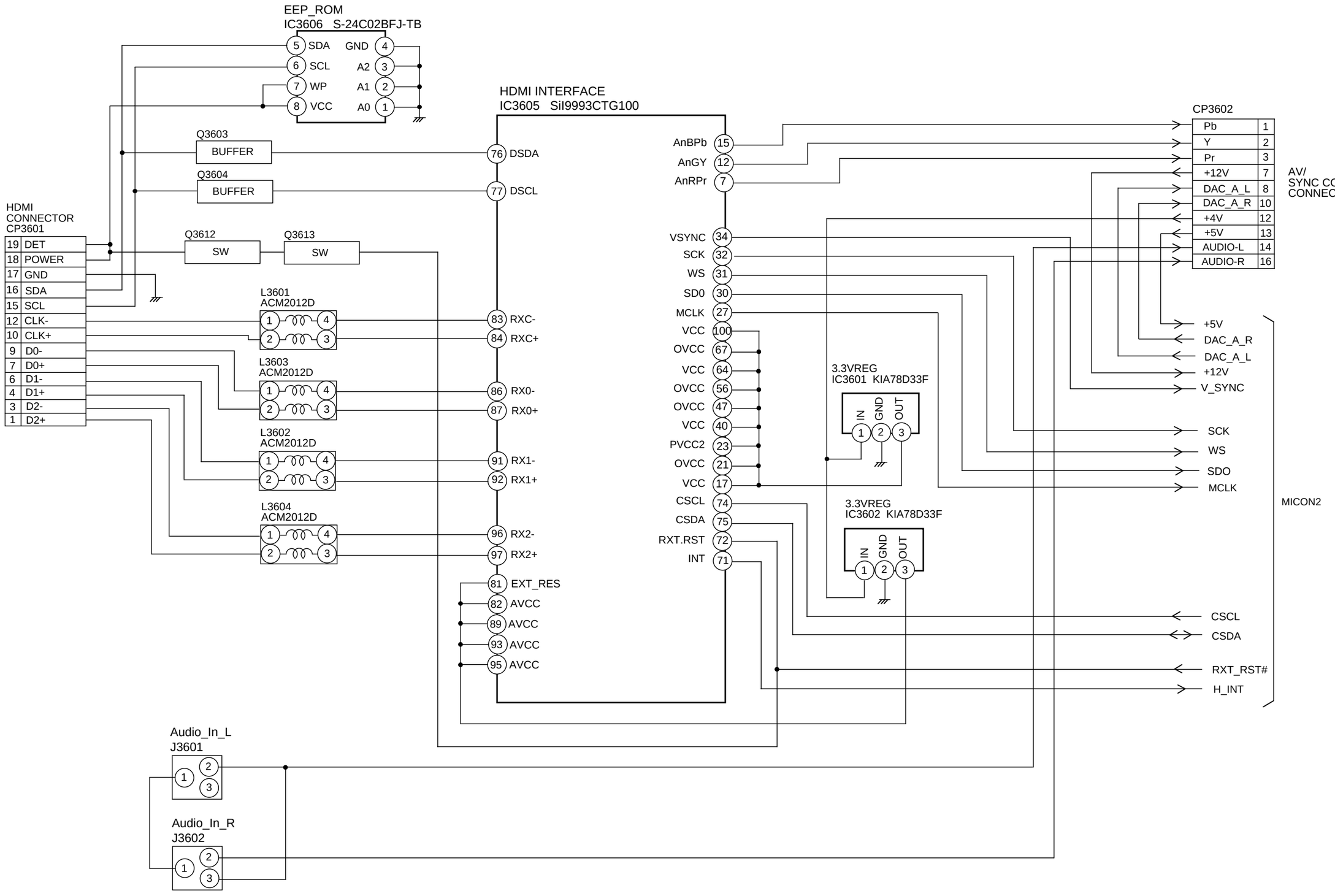
TV MICON BLOCK DIAGRAM



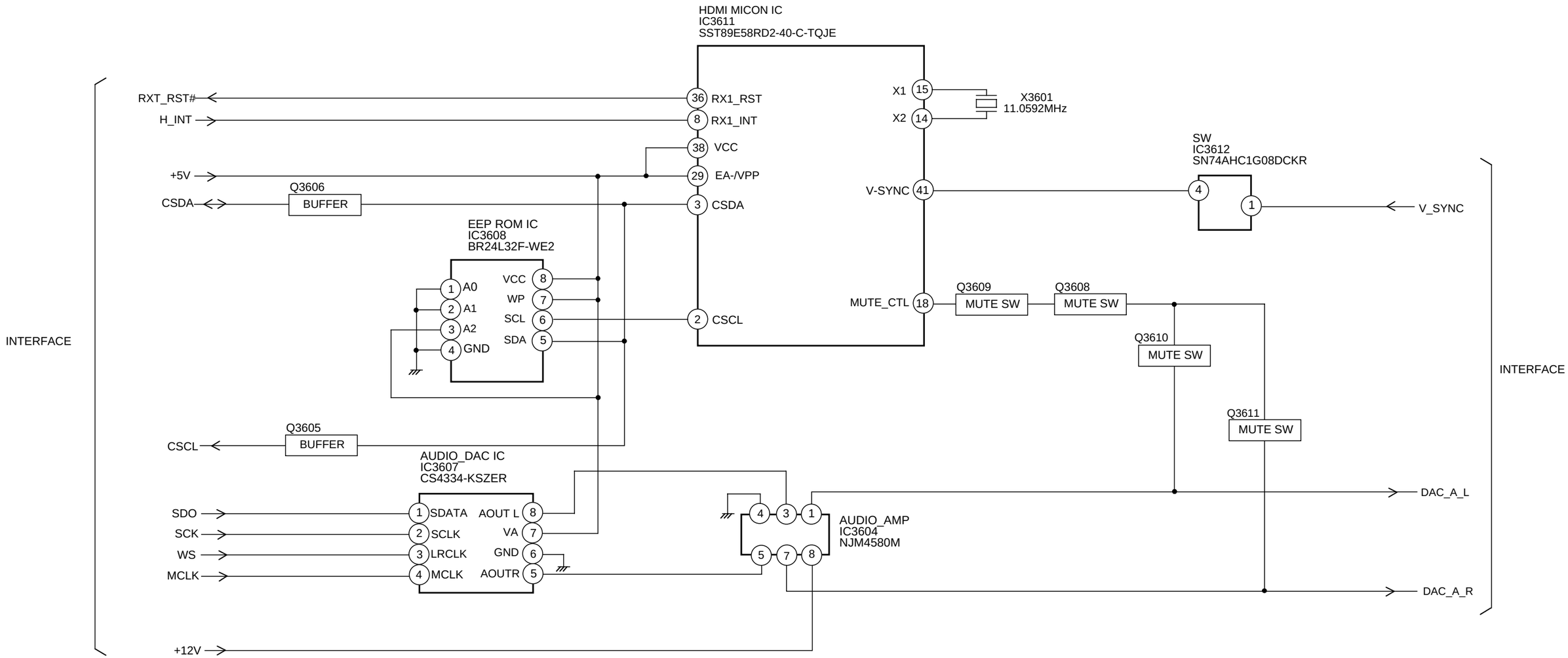
DVD IN/OUT BLOCK DIAGRAM



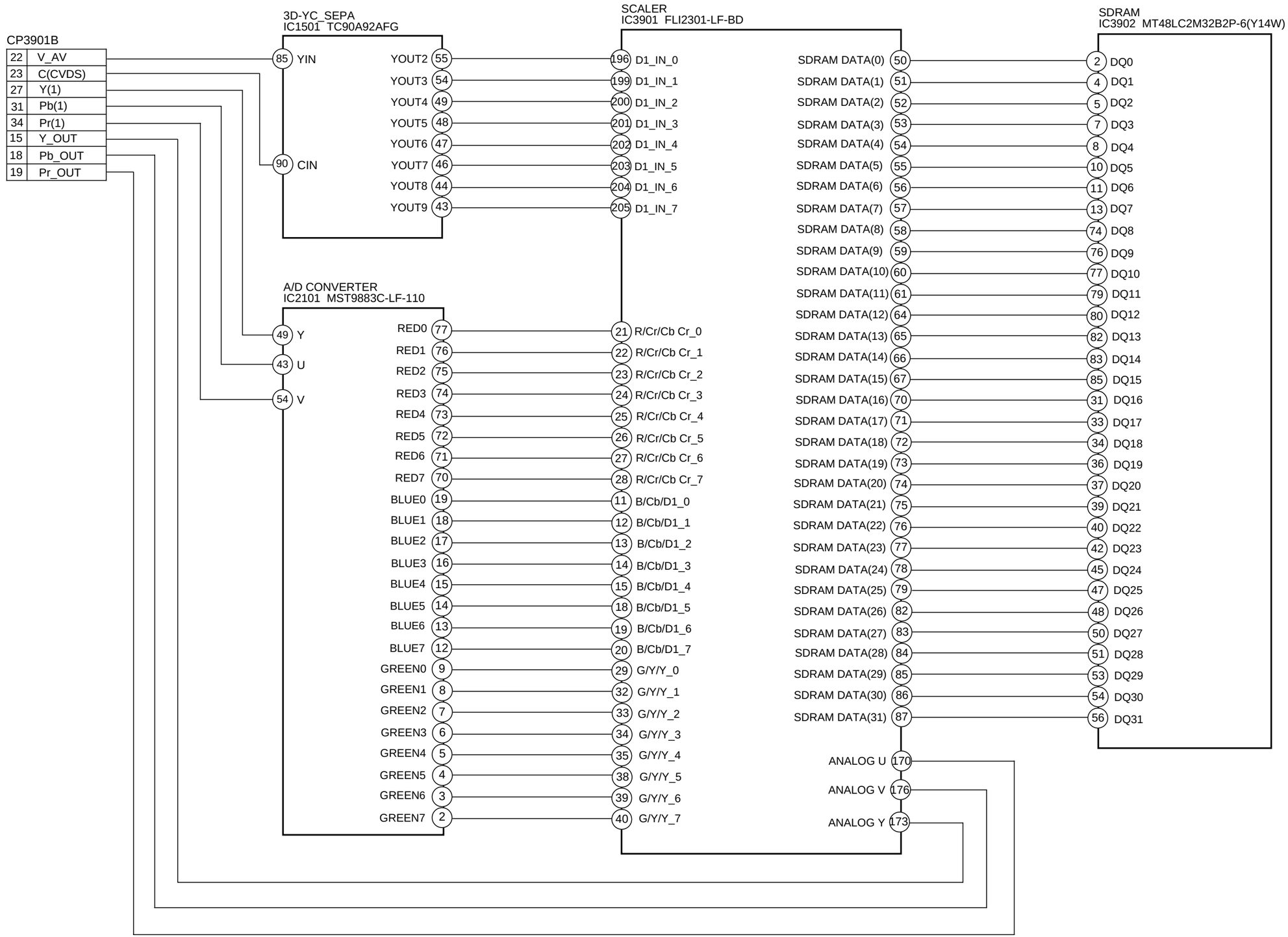
INTERFACE BLOCK DIAGRAM



MICON2 BLOCK DIAGRAM

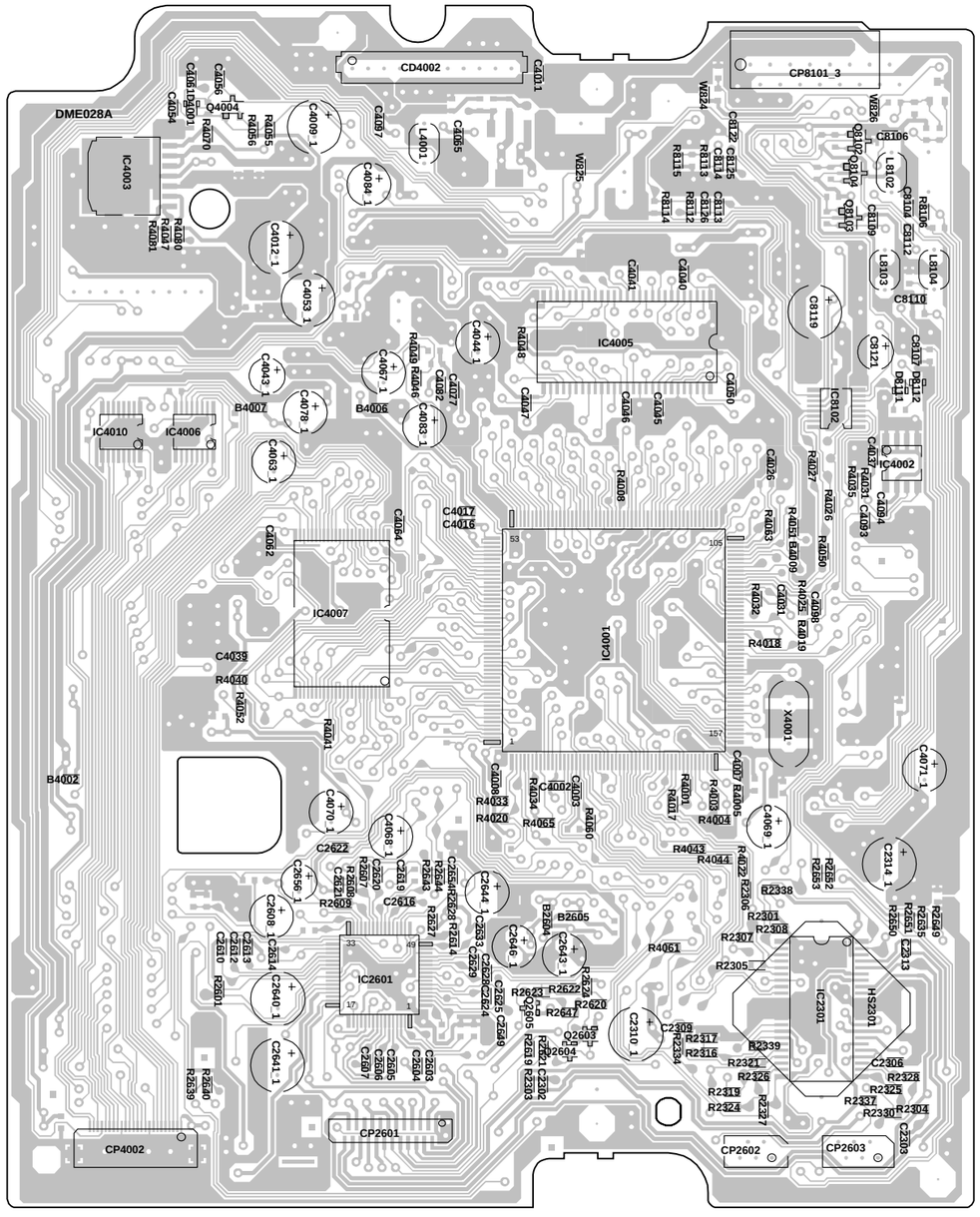


SCALER BLOCK DIAGRAM

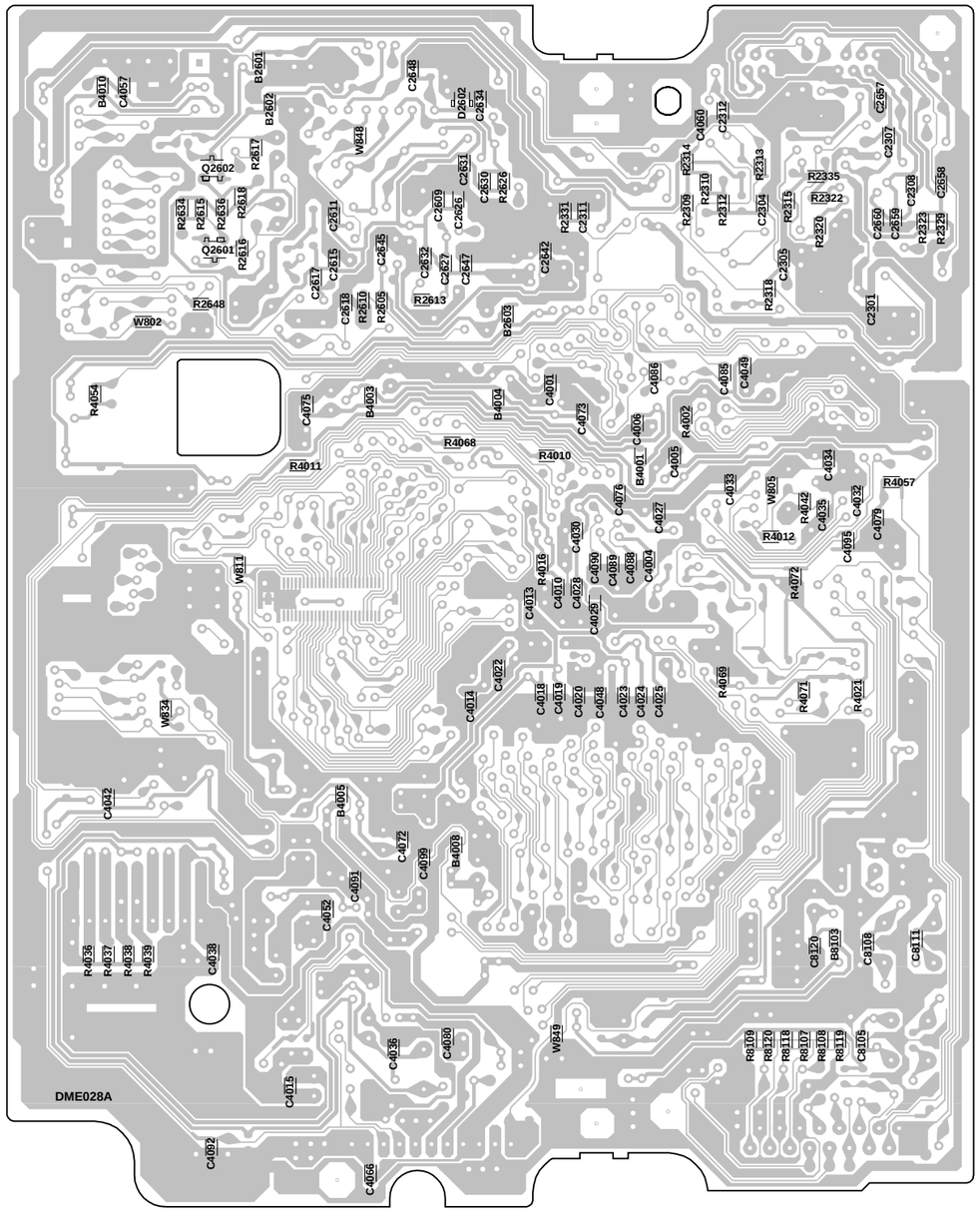


PRINTED CIRCUIT BOARDS

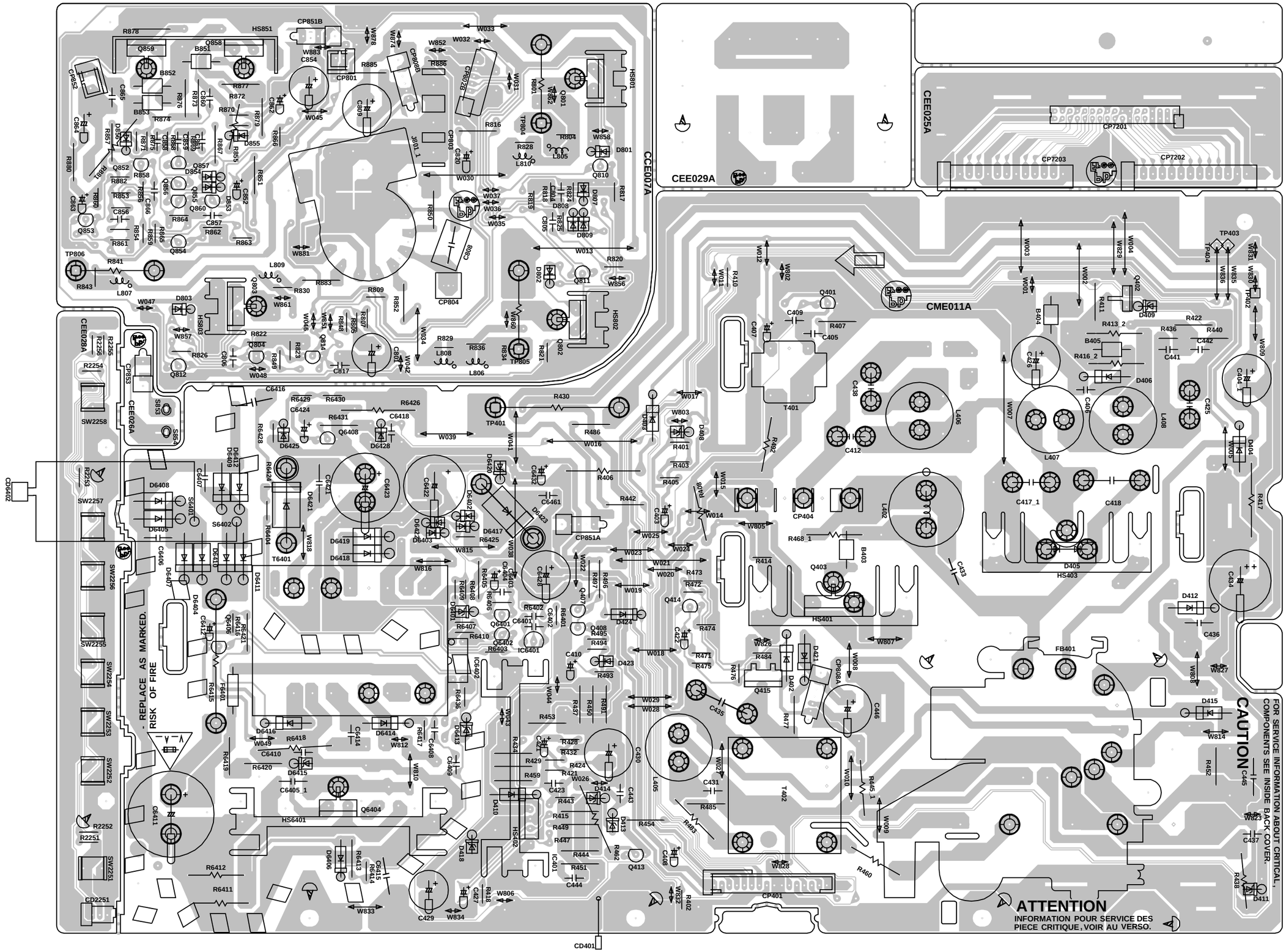
DVD (TOP SIDE)



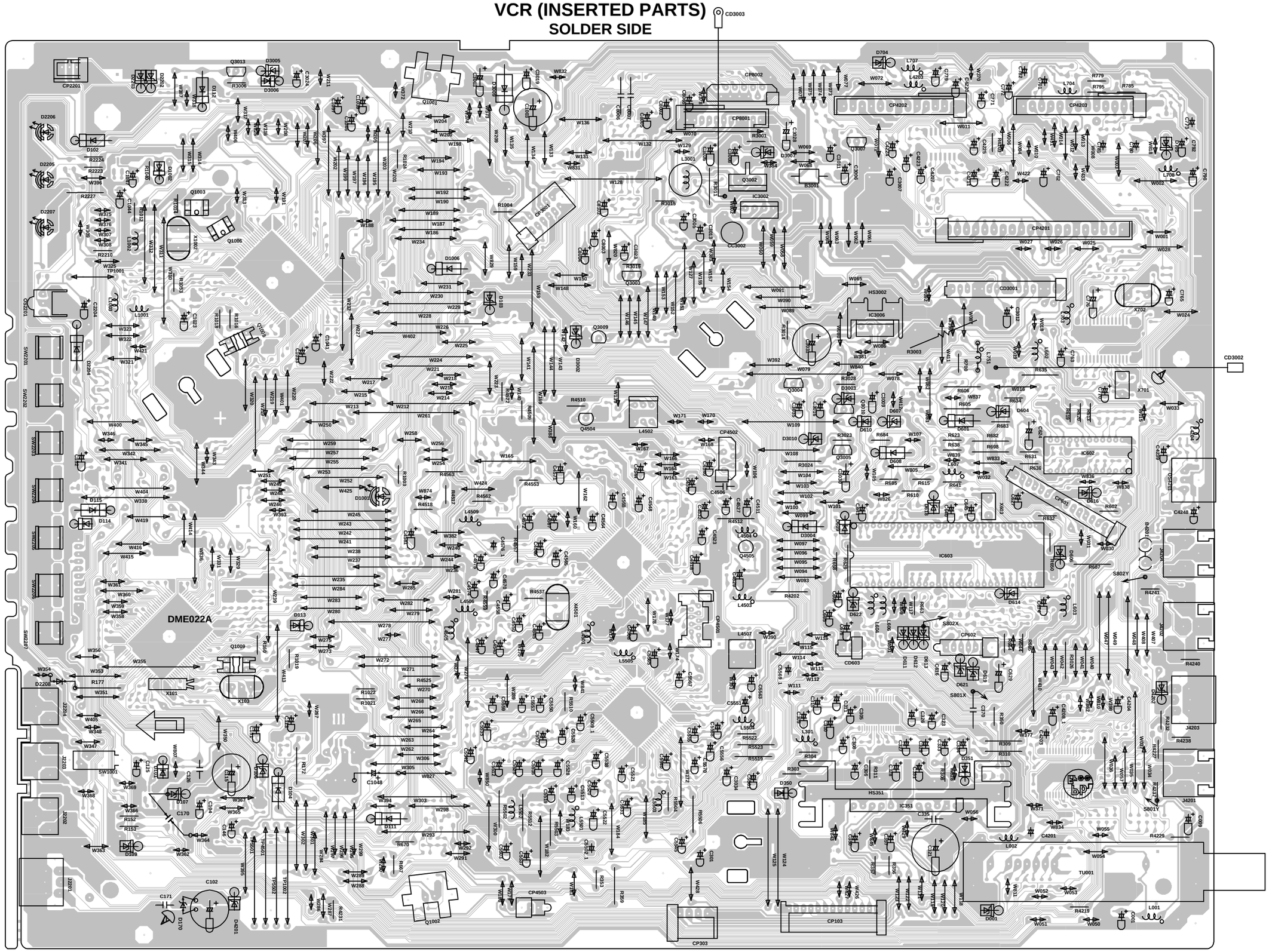
DVD (BOTTOM SIDE)



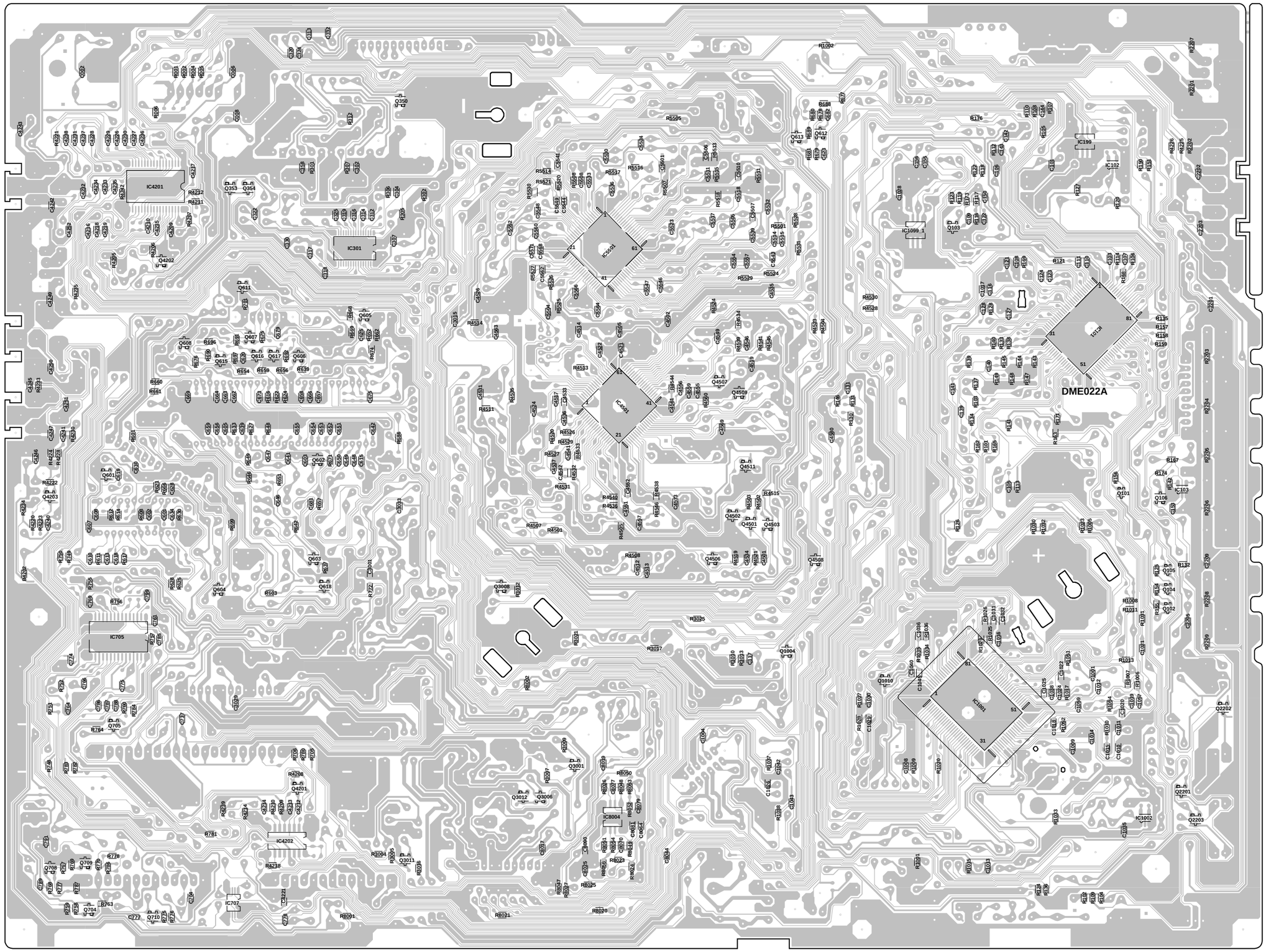
PRINTED CIRCUIT BOARDS
MAIN/CRT/OPERATION/CONNECTOR/VM COIL
SOLDER SIDE



PRINTED CIRCUIT BOARDS
VCR (INSERTED PARTS)
SOLDER SIDE

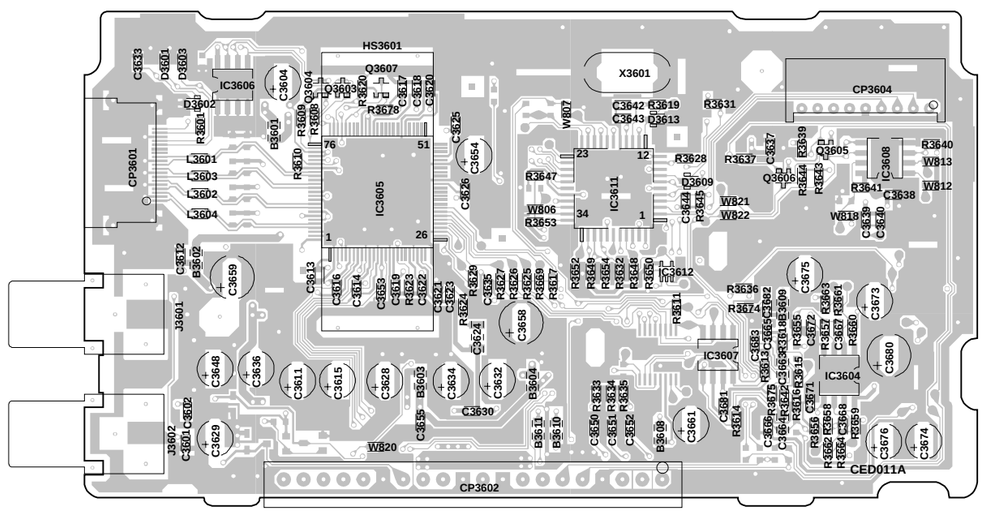


PRINTED CIRCUIT BOARDS
VCR (CHIP MOUNTED PARTS)
SOLDER SIDE

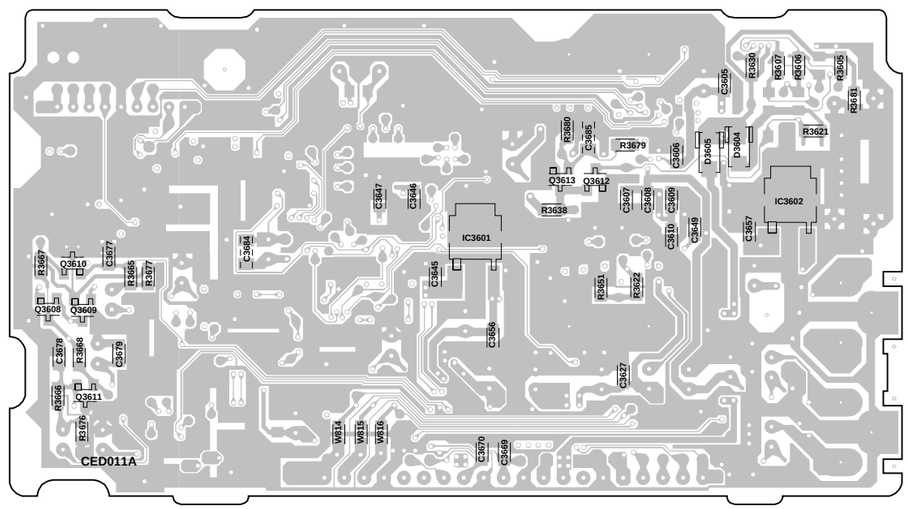


PRINTED CIRCUIT BOARDS

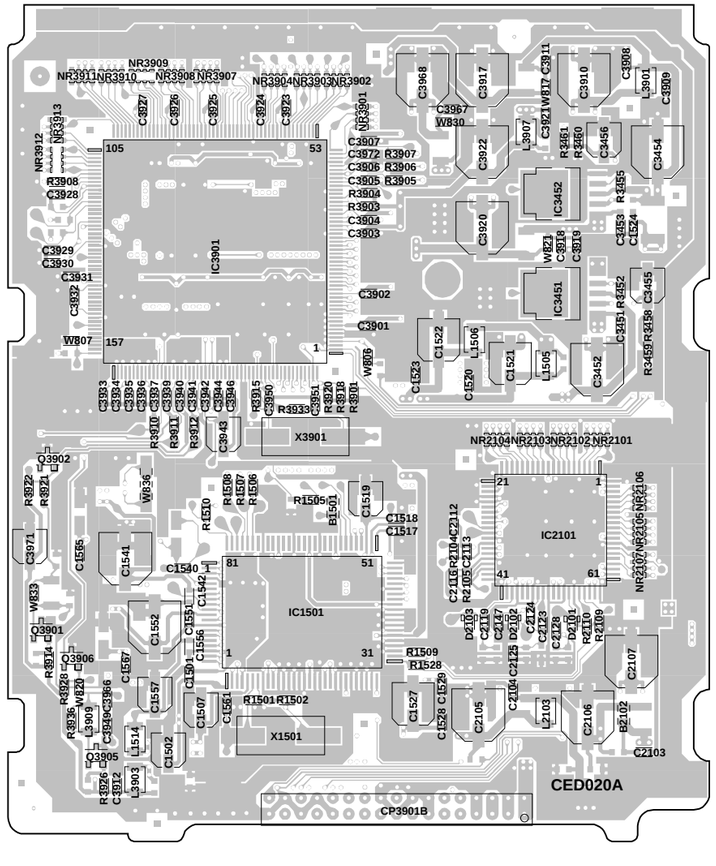
HD-MI (TOP SIDE)



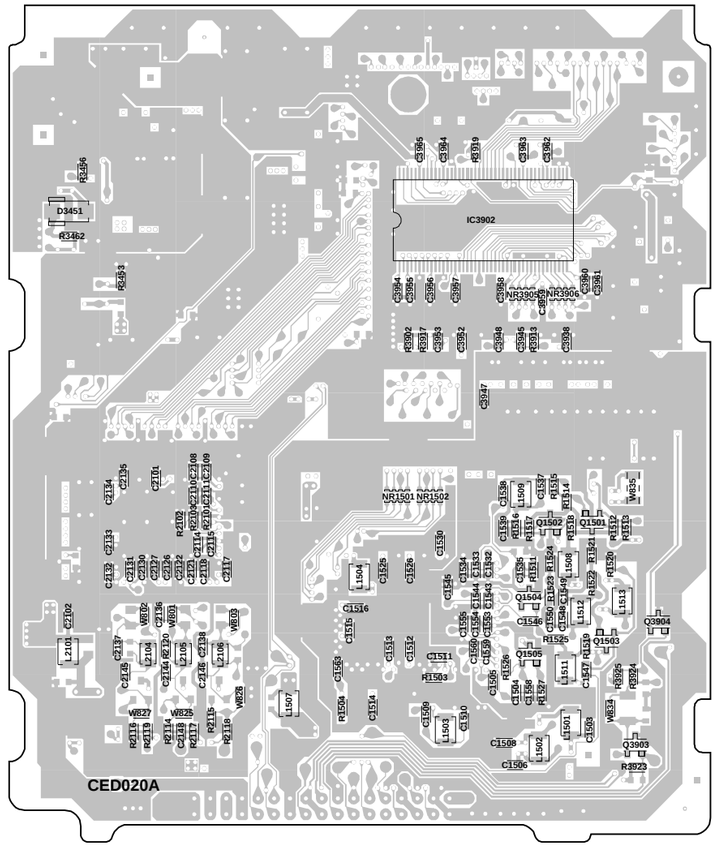
HD-MI (BOTTOM SIDE)



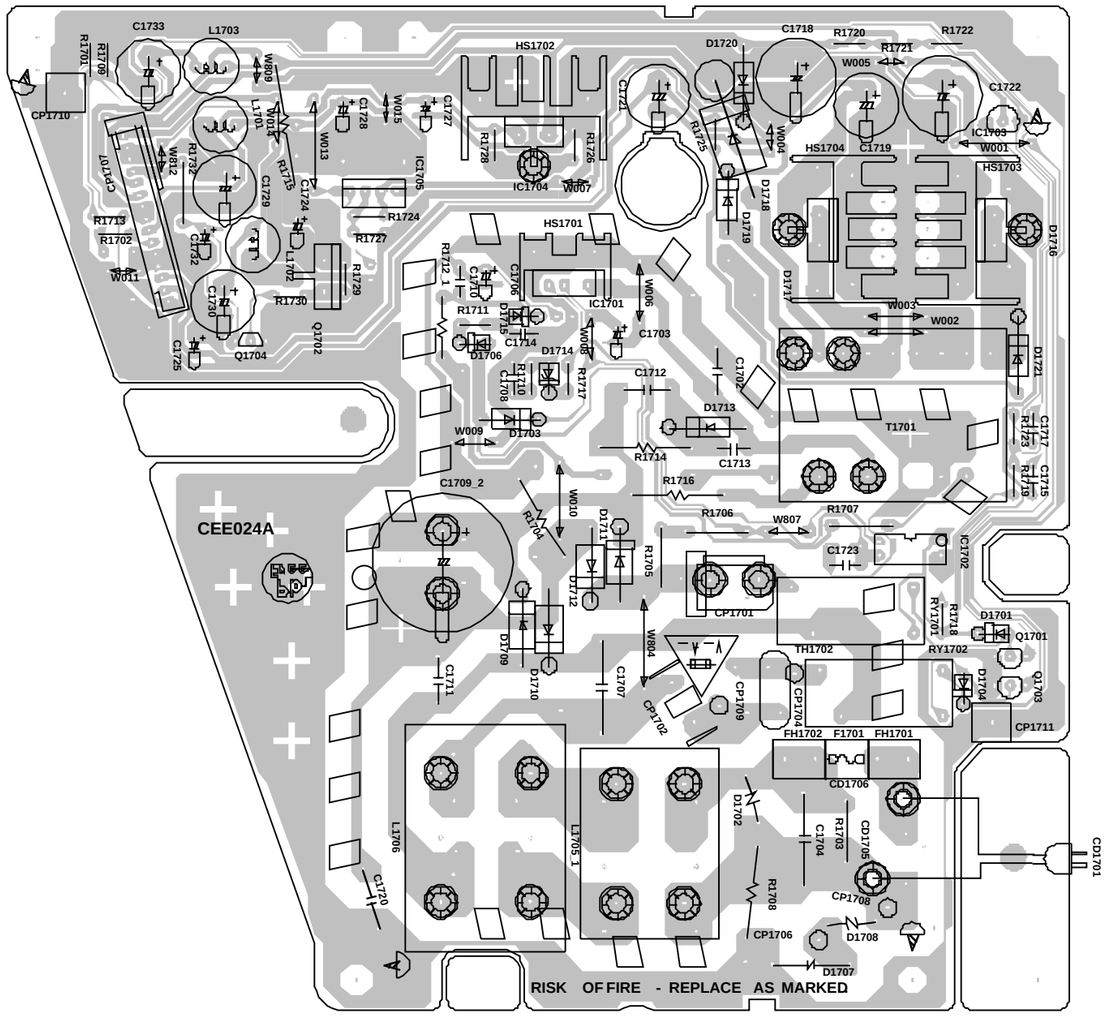
SCALER (TOP SIDE)



SCALER (BOTTOM SIDE)

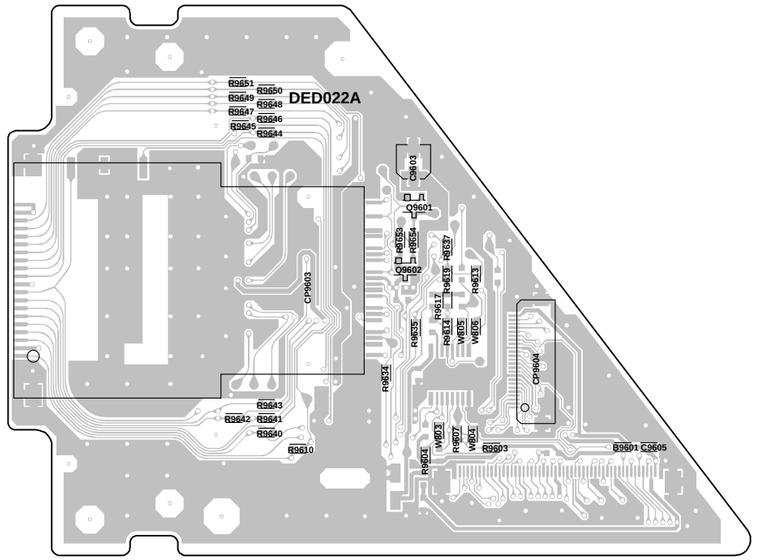


PRINTED CIRCUIT BOARDS
POWER
SOLDER SIDE

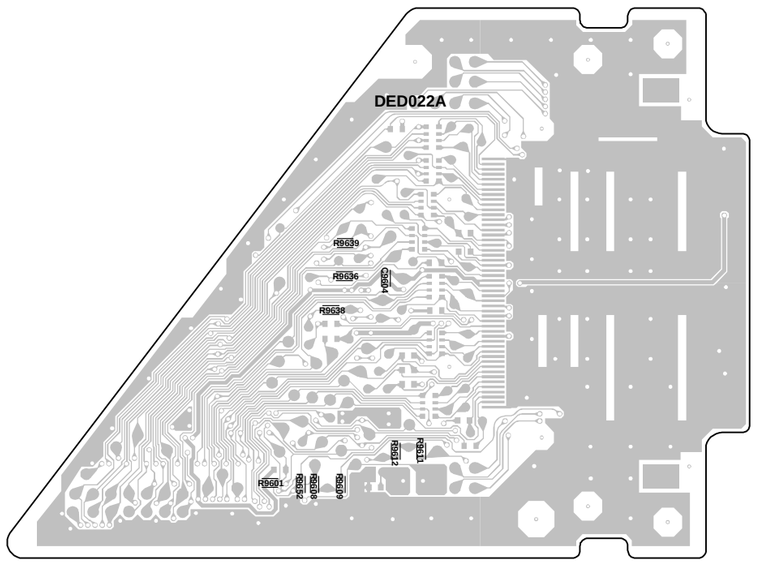


PRINTED CIRCUIT BOARDS

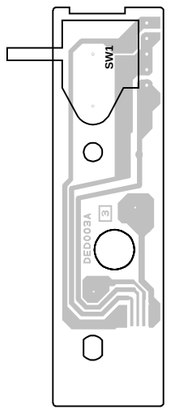
MEMORY CARD (TOP SIDE)



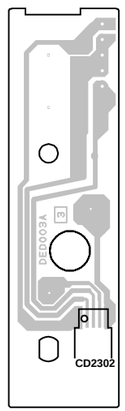
MEMORY CARD (BOTTOM SIDE)



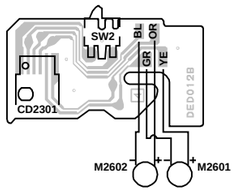
LOADING MOTOR (INSERTED PARTS)
SOLDER SIDE



LOADING MOTOR (CHIP MOUNTED PARTS)
SOLDER SIDE



SW
SOLDER SIDE



RF AMP/MOTOR DRIVE SCHEMATIC DIAGRAM

(DVD PCB)

DM3P(05SD)

FROM/TO LOADER

CP2601
09-5000-024-001-001

1	GND
2	F
3	Vref
4	VCC
5	E
6	D
7	C
8	SW1(DVD/CD)
9	VRF(RF OUT)
10	B
11	A
12	VR(DVD)
13	VR COM
14	VR(CD)
15	GND
16	LD(CD)
17	PD
18	LD(DVD)
19	GND
20	NC
21	T DRV
22	T RTN
23	F DRV
24	F RTN

CP2602
00_6232_005_006_800+

5	LD-
4	LD+
3	OPEN
2	GND(D)
1	CLOSE

CP2603
00_6232_006_006_800+

6	SW(GND)
5	LIMIT SW
4	SLD-
3	SLD+
2	SP1-
1	SP1+

READ CHANNEL IC
IC2601
ZR36708TQCG

MOTOR DRIVE IC
IC2301
LA6565

FROM/TO MPEG/MICON

FROM/TO MEMORY CARD1

PCB130
DME028

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

MPEG/MICON SCHEMATIC DIAGRAM

(DVD PCB)

MPEG/MICON
IC4001
ZR36778HQCG

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

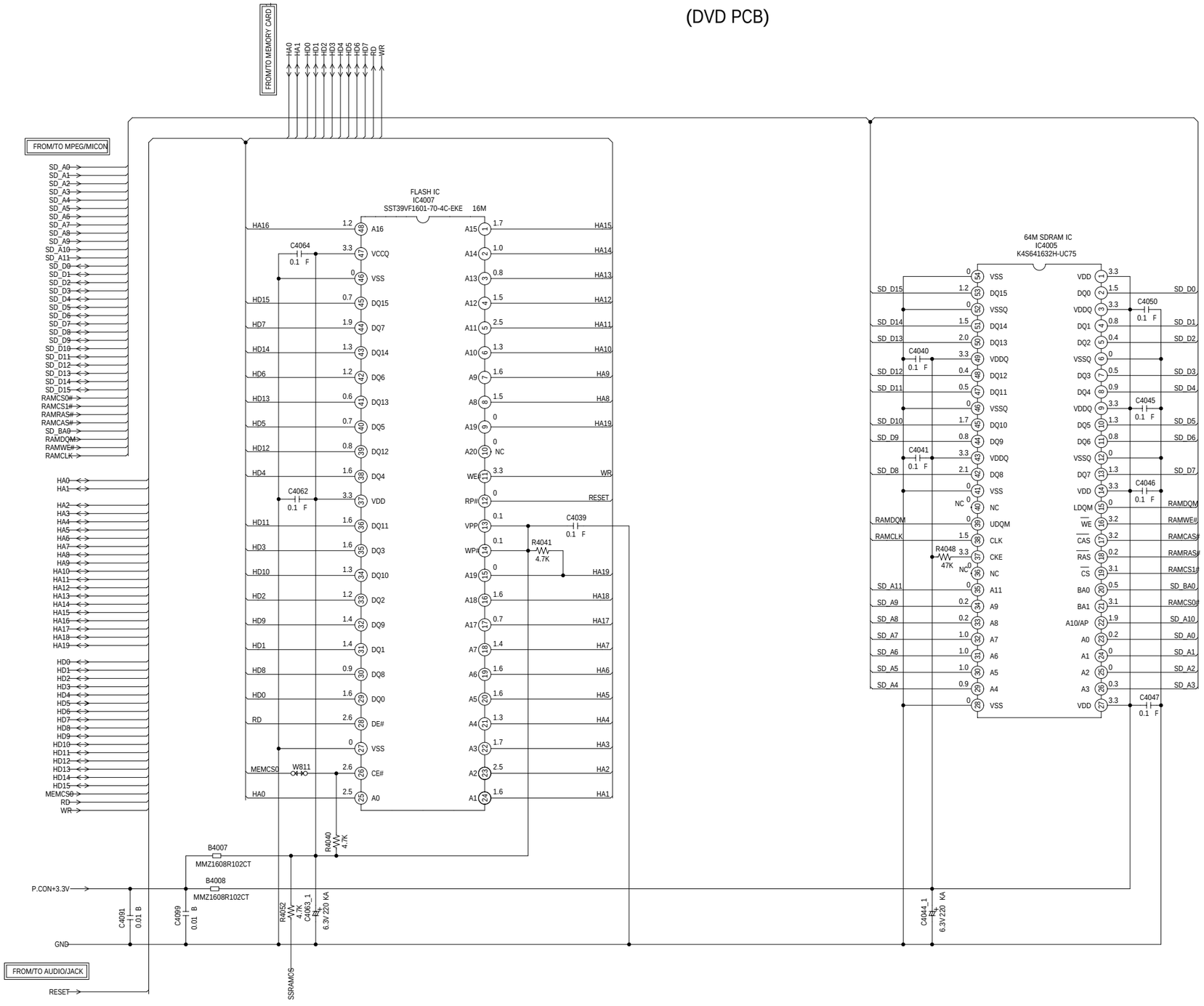
ATTENTION:LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

PCB130
DME028

MEMORY SCHEMATIC DIAGRAM

(DVD PCB)


FROM/TO MEMORY CARD
HA0 HA1 HD0 HD1 HD2 HD3 HD4 HD5 HD6 HD7 RD WR
FROM/TO MPEG/MICON
SD_A0 SD_A1 SD_A2 SD_A3 SD_A4 SD_A5 SD_A6 SD_A7 SD_A8 SD_A9 SD_A10 SD_A11 SD_D0 SD_D1 SD_D2 SD_D3 SD_D4 SD_D5 SD_D6 SD_D7 SD_D8 SD_D9 SD_D10 SD_D11 SD_D12 SD_D13 SD_D14 SD_D15
RAMCS0# RAMCS1# RAMRAS# RAMCAS# SD_BA0 RAMDQM RAMWE# RAMCLK
HA0 HA1 HA2 HA3 HA4 HA5 HA6 HA7 HA8 HA9 HA10 HA11 HA12 HA13 HA14 HA15 HA16 HA17 HA18 HA19
HD0 HD1 HD2 HD3 HD4 HD5 HD6 HD7 HD8 HD9 HD10 HD11 HD12 HD13 HD14 HD15
MEMCS0 RD WR
FLASH IC
IC4007
SST39VF1601-70-4C-EKE 16M
C4064 0.1 F
C4062 0.1 F
W811
B4007 MMZ1608R102CT
B4008 MMZ1608R102CT
R4040 4.7K
R4041 4.7K
C4039 0.1 F
P.CON+3.3V
GND
C4091 0.01 B
C4099 0.01 B
R4052 4.7K
C4063_1 6.3V 220 KA
SSRAMCS
FROM/TO AUDIO/JACK
RESET
64M SDRAM IC
IC4005
K4S641632H-UC75
C4040 0.1 F
C4041 0.1 F
R4048 47K
C4050 0.1 F
C4045 0.1 F
C4046 0.1 F
C4047 0.1 F
C4044_1 6.3V 220 KA

W811 SHORT FLASH MEMORY
W856 SHORT,W811 OPEN EXTERNAL SRAM

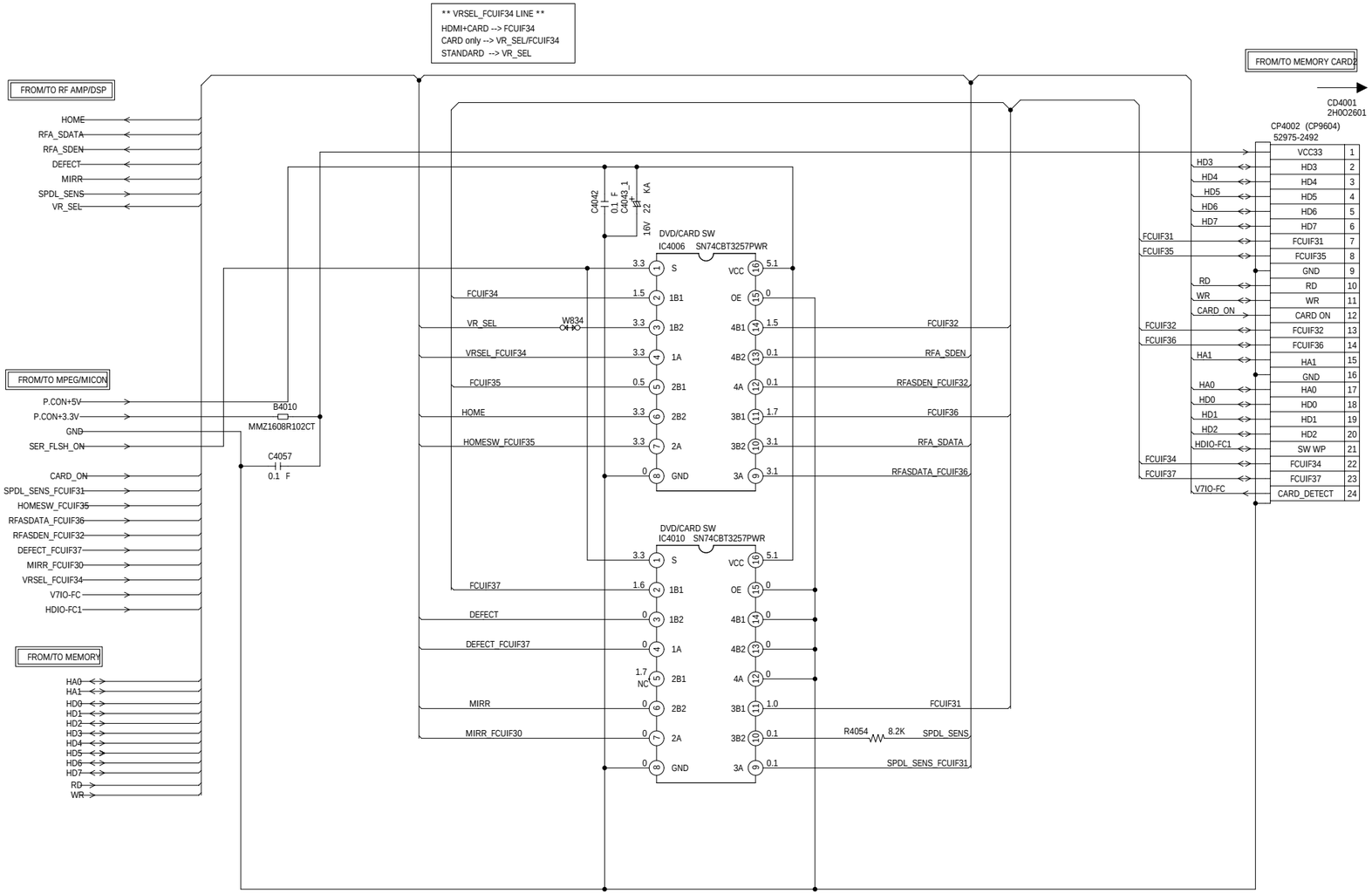
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

PCB130
DME028

MEMORY CARD1 SCHEMATIC DIAGRAM

(DVD PCB)



NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

PCB130
DME028

AUDIO/JACK SCHEMATIC DIAGRAM

(DVD PCB)

P.CON+A5V
R8118 470
R8119 470
R8120 470
R8107 470
R8108 470
R8109 470
DAC_C_VIDEO
DAC_B_VIDEO
DAC_D_DVD_VIDEO
10
9
8

FROM/TO MPEG/MICON
P.CON+A5V
DAC_VIDEO_A
DAC_VIDEO_C
DAC_VIDEO_B
DAC_VIDEO_D
P.CON+5V
R8106 75 +-1%
C8105 12P CH
L8102 1uH 0305
C8104 150P CH
C8106 150P CH
VIDEO_BUFFER Q8102 KTA1504S_Y_RTK
C8108 12P CH
L8103 1uH 0305
C8107 150P CH
C8109 150P CH
VIDEO_BUFFER Q8103 KTA1504S_Y_RTK
C8111 12P CH
L8104 1uH 0305
C8110 150P CH
C8112 150P CH
VIDEO_BUFFER Q8104 KTA1504S_Y_RTK

RESET
I2CDATA/MD
I2CCLK/MC
ML
AMCLK
ABCLK
ALRCLK
ASDATA0
P-H/I-L_RGB-H
V_SW
SYS_MUTE
GND

	1	2	3	4
A	Y	G	CVBS	Y
B	V	R	Y	V
C	U	B	C	U
D	C	CVBS	CVBS	CVBS

JG013
P-H/I-L_RGB-H → JG025
V_SW → JG030
W825
W826
RESET → JG031
ZERO → D8111 1SS355 → JG036
JG034
R_AUDIO
L_AUDIO → W824
JG035
JG048
JG037
DAC_B_VIDEO → JG042
DAC_C_VIDEO → JG040
DAC_D_DVD_VIDEO → JG038
SYS_MUTE → D8112 1SS355
C8122 0.001 B

FROM/TO MEMORY
RESET
B8103 MMZ1608R102CT
C8120 0.1 F
C8119 6.3V 100MH7
R8114 100K
R8115 100K
C8114 1 B
C8125 1 B
R8113 470
C8113 1 B
C8126 1 B
R8112 470

STEREO DAC IC IC8102 PCM1753DBQR
VOUTR VOUTL VCC VDD DGND LRCK DATA BCK
AGND VCOM ZEROR/ZEROA ZEROL/NA MD MC ML SCK
C8121 16V 10 MH7
ZERO
I2CDATA/MD
I2CCLK/MC
ML
AMCLK
ABCLK
ASDATA0
ALRCLK

FROM/TO REGULATOR
FFC(1.25mmP)
CD8101
2H0C1302
CP8101_3 (CP8002)
IMSA-9604S-12F

GND	12
DVD RESET	11
ZERO	10
AUDIO-R	9
GND	8
AUDIO-L	7
GND	6
Y	5
GND	4
C	3
GND	2
CVBS	1

DVD COMBO 180mm

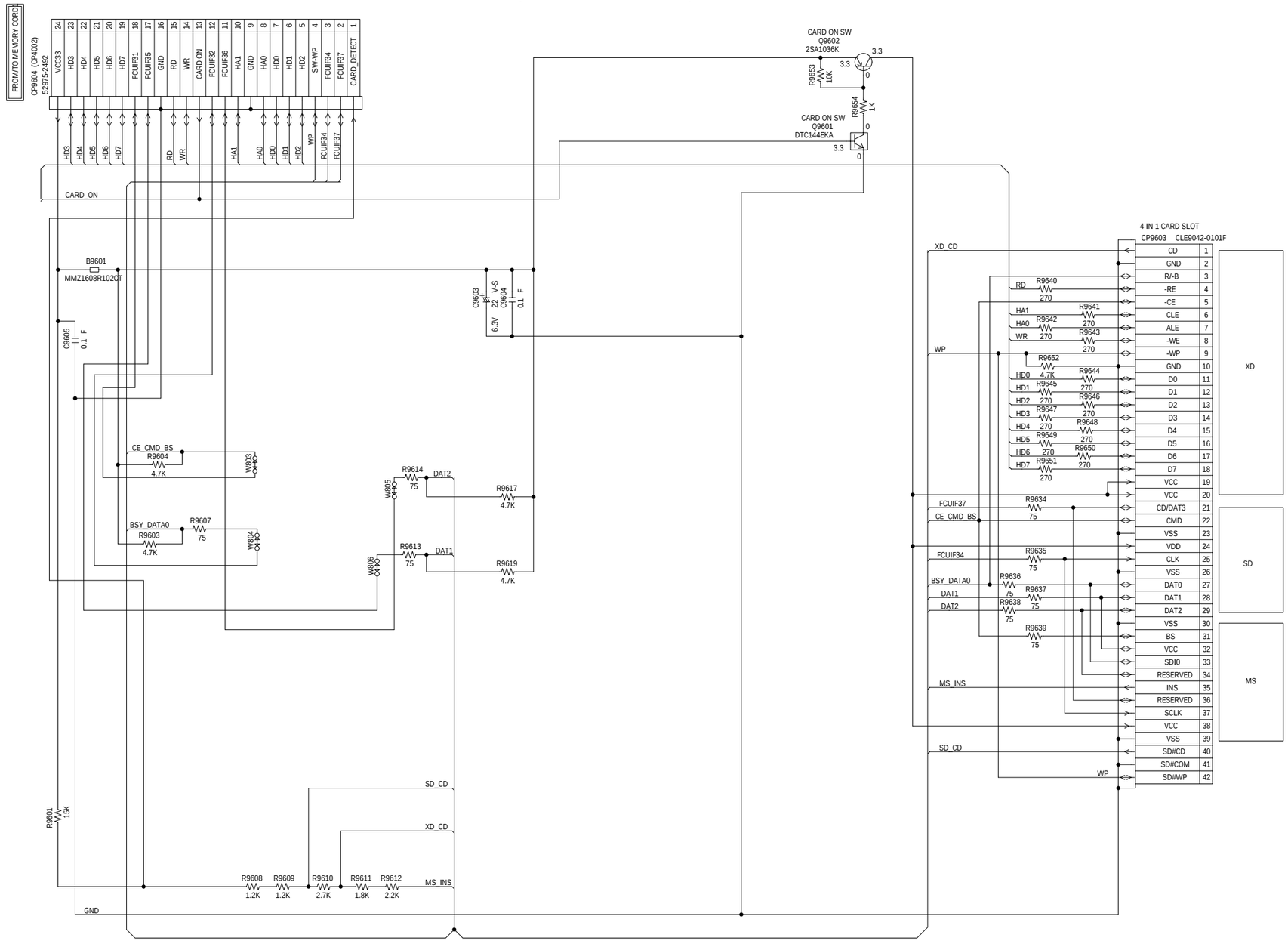
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

PCB130
DME028

MEMORY CARD2 SCHEMATIC DIAGRAM

(MEMORY CARD PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

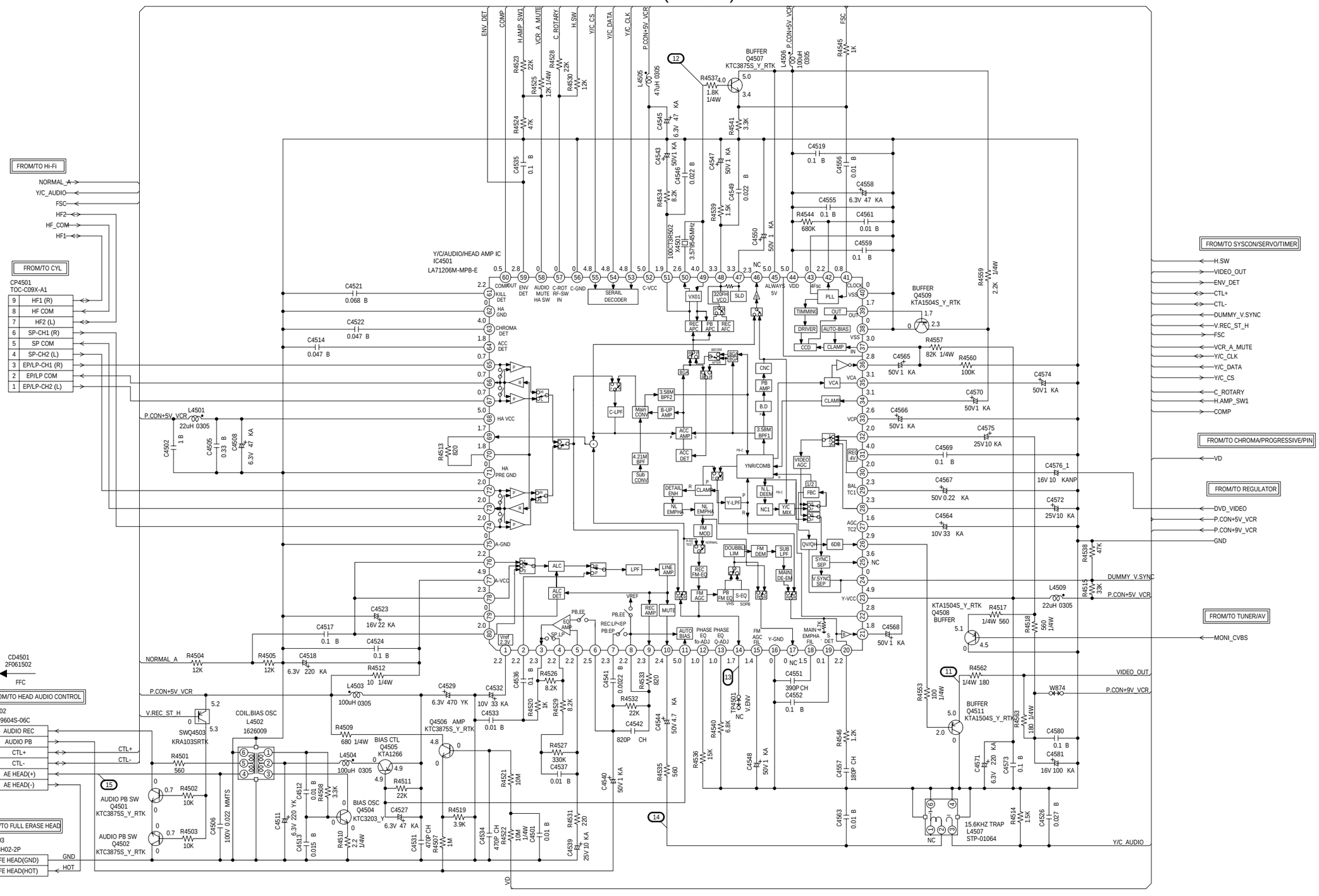
NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

CAUTION: DIGITAL TRANSISTOR

PCBDMC DED022

Y/C/A/HEAD AMP SCHEMATIC DIAGRAM

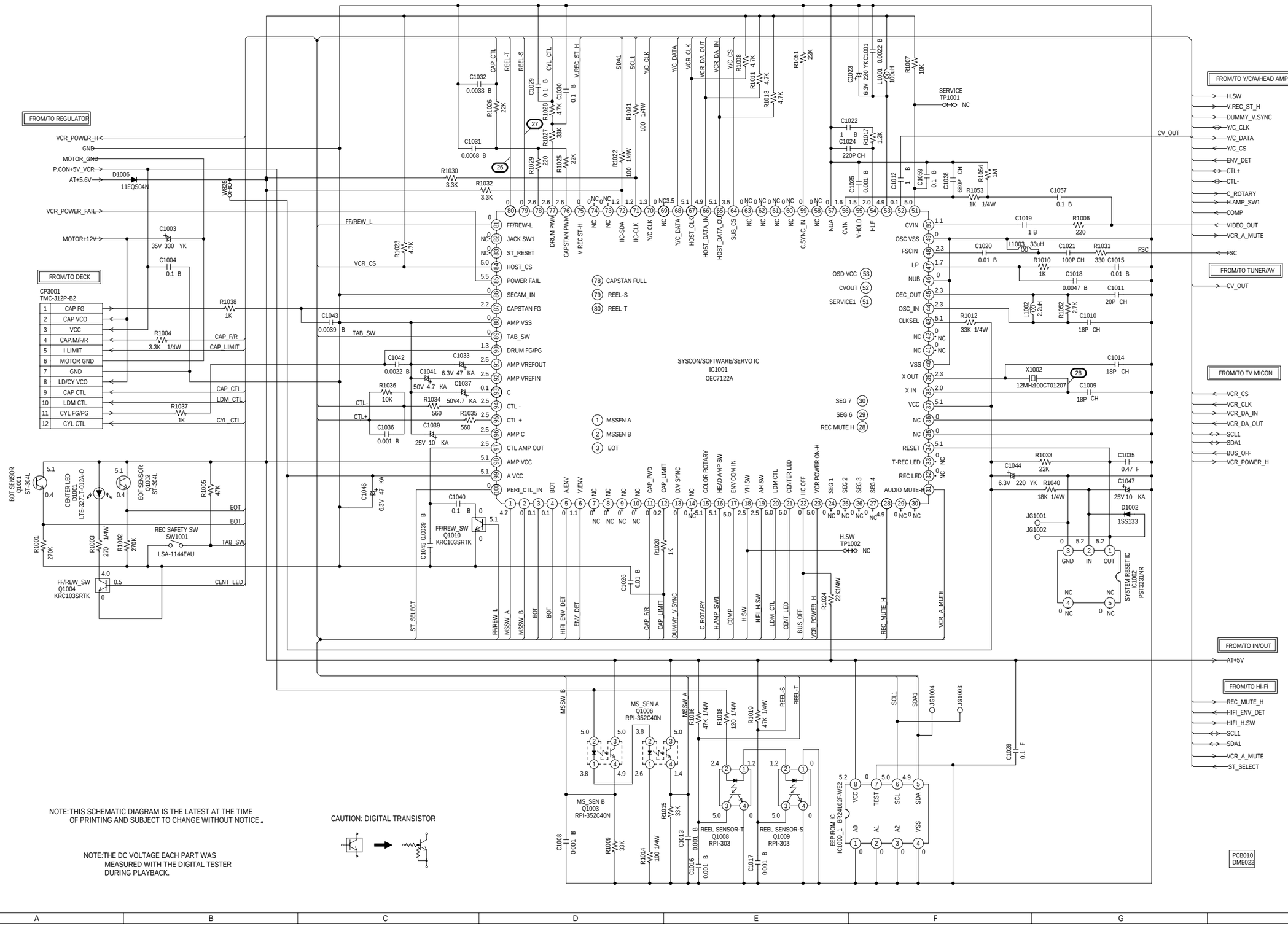
(VCR PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

SYSCON/SERVO/TIMER SCHEMATIC DIAGRAM (VCR PCB)



REGULATOR SCHEMATIC DIAGRAM

(VCR PCB)

FROM/TO POWER

CD3001 (CP1707)
C32F5001

1	HDMI+4V
2	P.CON+3.3V
3	P.CON+3.3V
4	CHROMA POWER H
5	UNREG+13V
6	MOTOR GND
7	UNREG+5V
8	UNREG+5V
9	AT+5.6V
10	TV POWER H
11	GND
12	GND
13	P.FAIL
14	TUNER+32V
15	DEGAUSS H

CD3002 (CP1710) C3015004

1	GND

L3003
W5T29X7.5X19

FROM/TO MPEG/MICON

CP8001 (CD4002)
A2001WV2-11P

1	GND(D)
2	GND(D)
3	TX
4	RX
5	GND(M)
6	P.CON+9V
7	P.CON+A5V
8	DVD+3.8V
9	DVD+3.8V
10	GND(A)
11	SPDIF

FROM/TO AUDIO/JACK

CP8002 (CP8101_3)
IMSA-9604S-12C

12	CVBS
11	GND
10	C
9	GND
8	Y
7	GND
6	AUDIO-L
5	GND
4	AUDIO-R
3	ZERO
2	DVD RESET
1	GND

CD3003 C3013301

1	GND

W832 C3003 16V 470 YK C3019 16V 220 YK D3009 21DQ09N MOTOR+12V
AT+5.6V_A W829
HDMI+4V
P.CON+3.3V_DEGI
CHROMA_POWER_H
P.CON+9V_VCR
MOTOR_GND
UNREG+5V
C3012 10V 470 YK
P.CON+12V
C3029 0.01 B
C8019 56P CH
VCR_POWER_FAIL
TX
RX
C8017 0.1 B
P.CON+9V_DH
P.CON+5V_D
TV_POWER_FAIL
R8001 220 SPDIF-134
DEGAUSS_H
TV_POWER_H
W831
DVD_VIDEO
DVD_C
DVD_Y
AT+5.6V_A
P.CON+3.3V_DEGI
R8002 4.7K ZERO
DVD_RESET
C8044 0.1 B
P.CON+12V

R3003 2.2 2W

P.CON+9V OUT IC
IC3006 KIA278R09PI
IN OUT GND SW
11.6 9.0 0 3.3

D3004 11EQS04N
P.CON+9V_VCR SW
Q3004 KTC3209_Y
9.3 11.6 9.9
W840
C3015 0.1 B
C3034 25V 1000 YK
R3014 390 1/4W
D3010 MTZ2108
C3035 25V 10 KA
HS6S HS3002 763WAA0309
C3031 16V 1000 YK

R3026 1/2W 4.7K
P.CON+5V_D_SW
Q3003 KTA1281_Y
Q3001 SW KTC3875S_Y_RTK
0 0.6 0.7
R3015 150 1/4W
R3019 22K 1/4W
C3005 50V 2.2 KA
R3009 15K
C3023 10V 33 KA
R3010 18K
BUFFER Q3009 KTA1266
5.5 4.8 5.5
D3002 MTZJ11B
R3021 1K
R3017 10K
R3013 4.7K

P.CON+9V_D OUT IC
IC3002 KIA278R09PI
IN OUT GND SW
12.8 9.0 0 3.3
R3007 15K
C3013 50V 1 KA
W802
C3028 16V 470 YK

KTA1273_Y
Q3005
P.CON+5V_VCR SW
5.1 5.0 4.2
R3023 22K 1/4W
R3024 1/4W 100
KTC3875S_Y_RTK
Q3008
SW 0 0.8
R3012 1/4W 100K
P.CON+5V SW
Q3010
KTC3209_Y
5.1 5.1 5.8
D3003 MTZJ6.2B
R3028 1/4W 390
C3016 25V 10 KA
C3009 6.3V 470 YK
C3001 0.1 B
R3025 10K
C3030 6.3V 1000YK
C3033 0.1 B

UNREG+5V
P.CON+5V
VCR_POWER_H
CHROMA_POWER_H
P.CON+9V
P.CON+5V_VCR
AT+5.6V
P.CON+5V_D
AT+30V

FROM/TO TV MICON
GND
DVD_RESET
TV_POWER_H
DEGAUSS_H
P.CON+3.3V_DEGI
TV_POWER_FAIL
AT+5.6V
AT+3.3V
TX
RX
DVD_H
CHROMA_POWER_H

FROM/TO TUNER/AV
P.CON+5V
P.CON+9V
AT+30V
DVD_Y
DVD_C
SPDIF-134
DVD_AUDIO_L
DVD_AUDIO_R
GND

FROM/TO Y/C/A/HEAD AMP
P.CON+5V_VCR
P.CON+9V_VCR
DVD_VIDEO
GND

FROM/TO IN/OUT
GND

FROM/TO SYSCON/SERVO/TIMER
VCR_POWER_H
MOTOR+12V
P.CON+5V_VCR
AT+5.6V
VCR_POWER_FAIL
MOTOR_GND
GND

FROM/TO SOUND AMP/SURROUND
P.CON+9V
ZERO
P.CON+5V
GND

FROM/TO CHROMA/PROGRESSIVE/PIN
P.CON+9V
P.CON+5V
GND

FROM/TO Hi-Fi
DVD_AUDIO_L
DVD_AUDIO_R
P.CON+5V_VCR
P.CON+9V_VCR
AT+5.6V
GND

FROM/TO SYNC COUNT/CONNECTOR
GND
P.CON+5V
MOTOR+12V
P.CON+9V
P.CON+3.3V_DEGI
HDMI+4V

AT3.3V REG
Q3013
KTC3209_Y
5.4 3.6 4.3
R3006 270 1/4W
D3005 MTZJ3.6B
C3024 50V 1 KA
D3006 1SS133
AT+3.3V
L3001 10uHTSL0808
Q3006 SW KRA102SRTK
12.8 12.8 0
Q3012 SW KRC102SRTK
0 3.3 0
AT+3.3V SW
Q3002
KTC4369
5.1 3.9 4.6
UNREG+5V
CC3002 8990TPA002 NC
R3001 1/4W 1K1
C3026 6.3V 470 YK
D3007 MTZJ4.3B
C3008 16V 33 KA
R3011 330 1/2W
W820

C8090 0.1 F
C8002 16V 220 YK
C8005 50V 2.2 KA
R8054 8.2K
R8056 3.9K
C8070 820P CH
C8091 100P CH
R8051 18K
C8004 16V22 KA
DVD_AUDIO_L
R8023 10K
R8049 10K
R8020 4.7K
C8007 1 F
R8024 100K
R8027 1/4W 1K
R8021 4.7K
C8006 1 F
R8025 100K
MIXER IC IC8004 NJM4580M
A_GND VCC
0 6.1 6.1 6.1 6.1
6.1 6.1 6.1 12.3
C8077 820P CH
C8003 16V22 KA
DVD_AUDIO_R
R8047 1/4W 1K
C8065 10V 33 KA
C8064 820P CH
C8025 820P CH
R8026 10K
R8048 10K
R8050 18K
R8052 8.2K
R8053 3.9K
C8102 50V 2.2 KA
C8079 100P CH

C3007 50V 1 KA
C3006 16V 220 YK
C3011 50V 4.7 KA
SW Q3011 KTC3875S_Y_RTK
0 0.7 0
R3016 10K
VCR_POWER_H
R3004 10K
R3005 4.7K
B3001 W5RH3.5X5X1.0
12.8 12.2 12.8
P.CON+12V SW
Q3007
KTA1281_Y
P.CON+12V

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

CAUTION: DIGITAL TRANSISTOR

CAUTION: DIGITAL TRANSISTOR

PCB010
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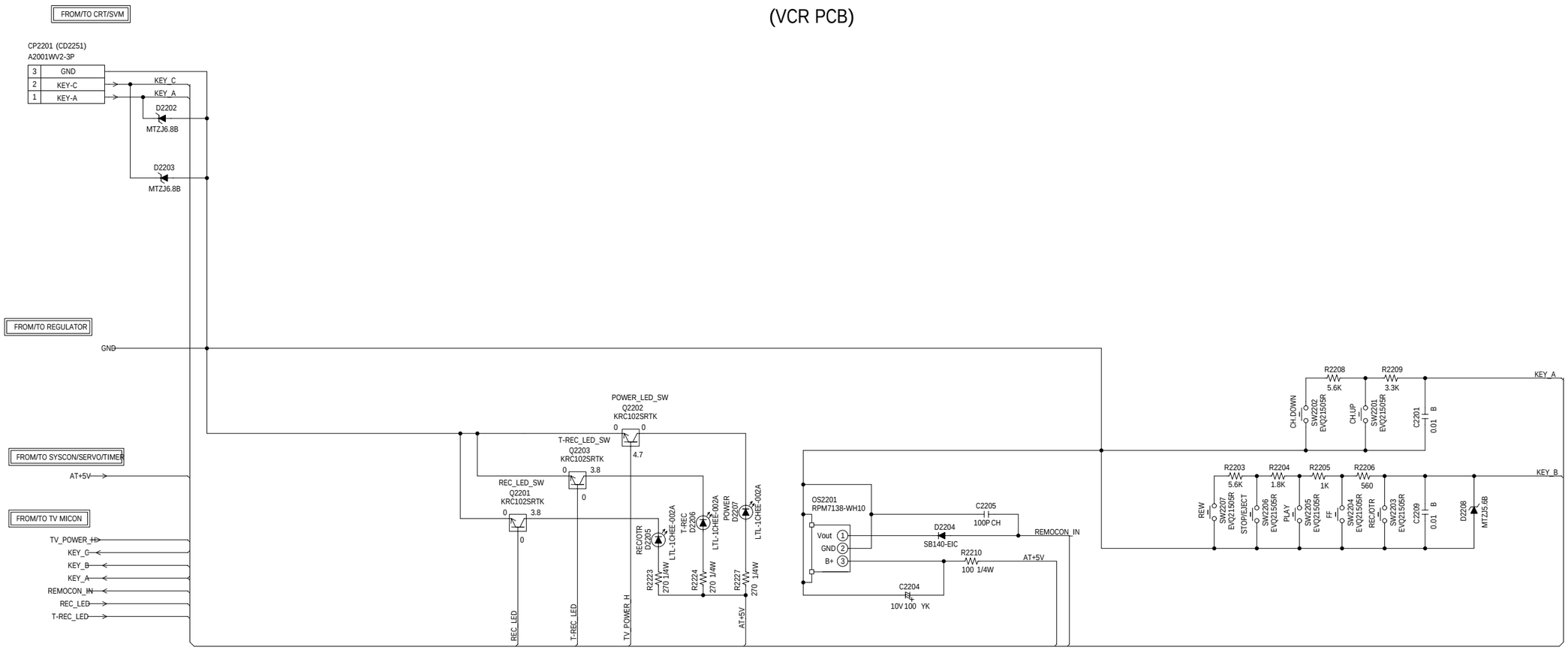
IN/OUT OPERATION DIAGRAM

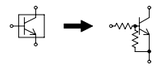
(VCR PCB)



NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

CAUTION: DIGITAL TRANSISTOR



PCB010
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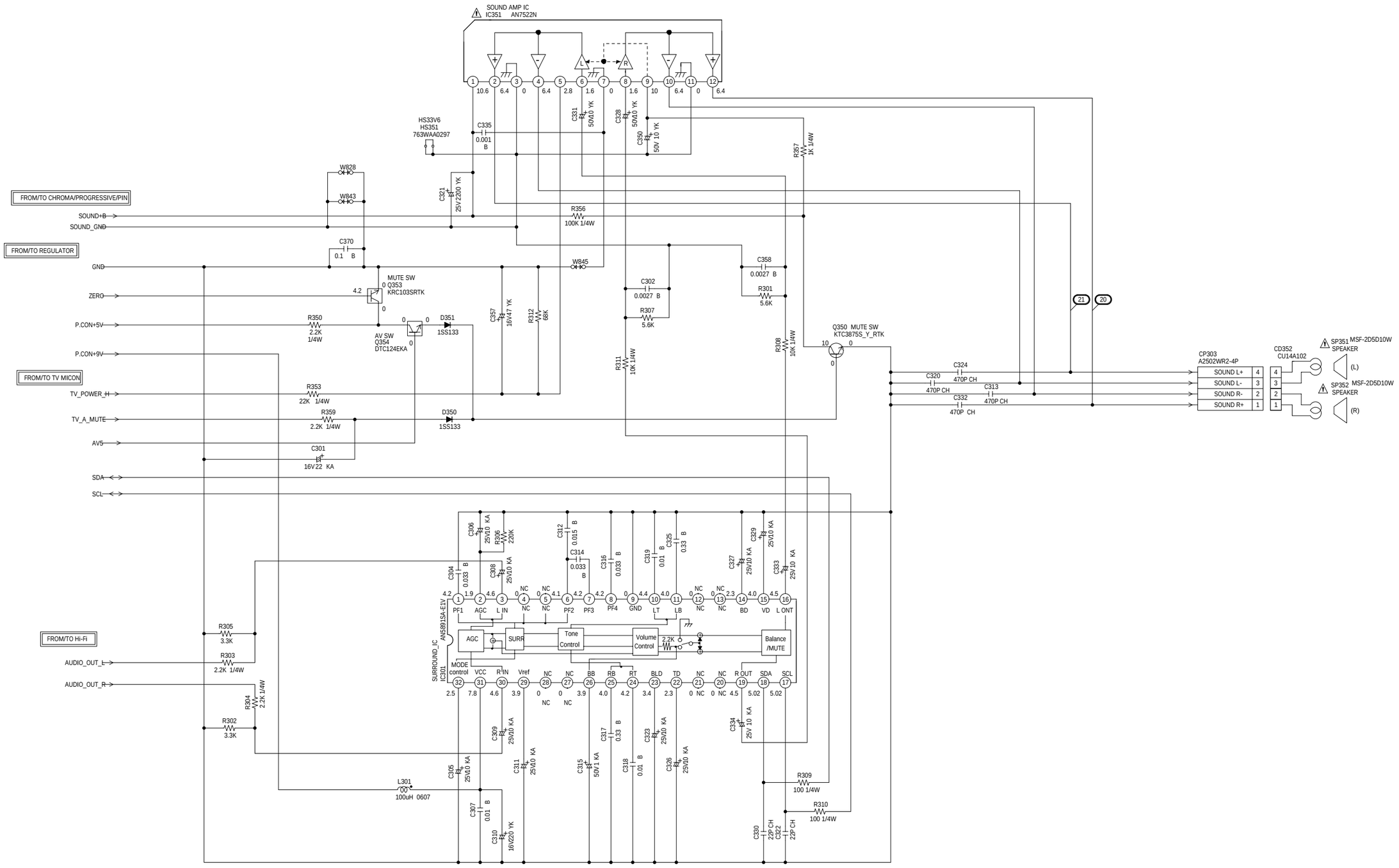
SOUND AMP/SURROUND SCHEMATIC DIAGRAM

(VCR PCB)



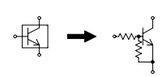
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION:LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

CAUTION: DIGITAL TRANSISTOR



PCB010
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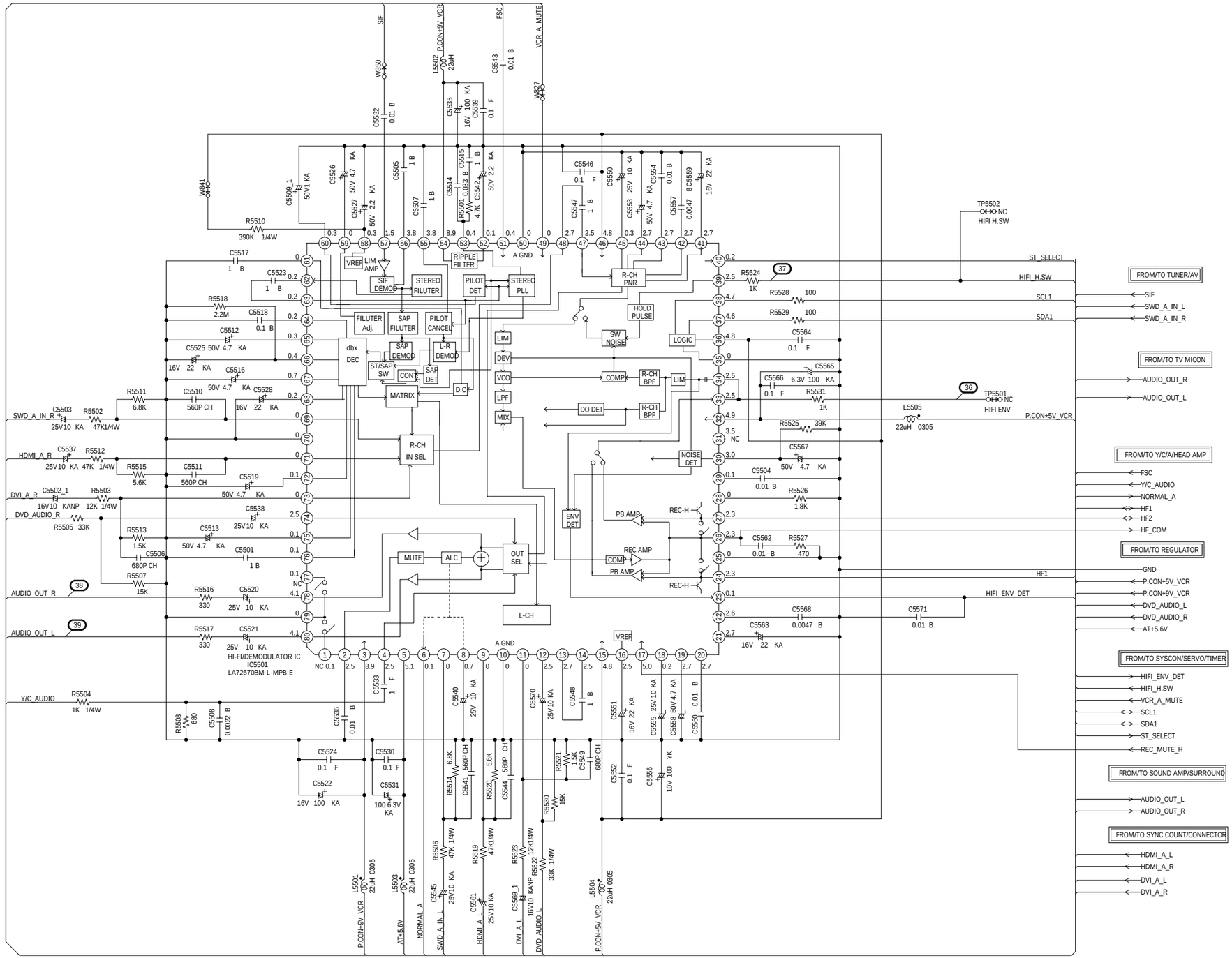
Hi-Fi SCHEMATIC DIAGRAM

(VCR PCB)



NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

PCB010
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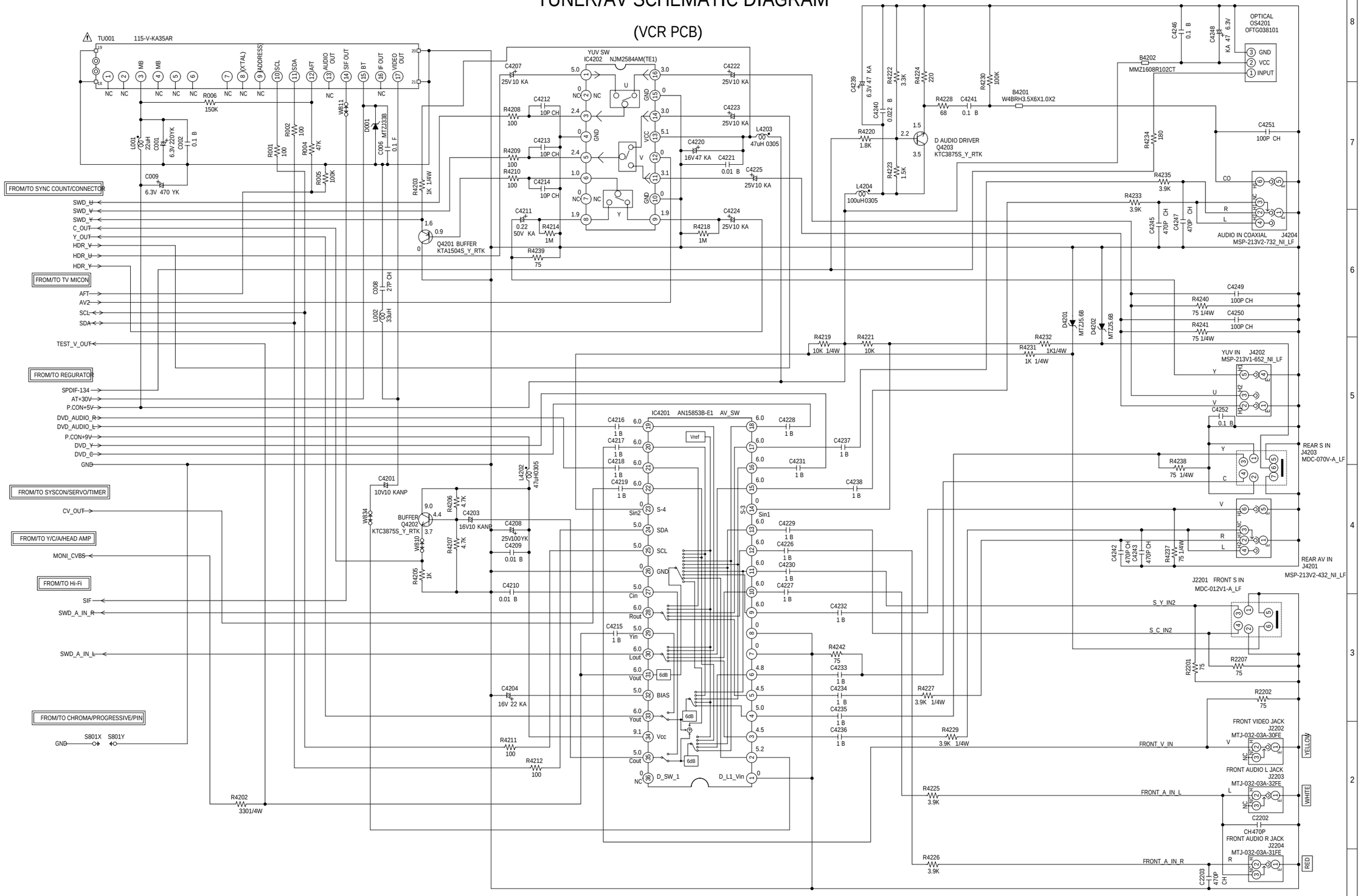
TUNER/AV SCHEMATIC DIAGRAM

(VCR PCB)


TU001 115-V-KA35AR
NC NC MB MB NC NC R006 150K NC NC NC (XTAL) ADDRESS SCL SDA AFT AUDIO OUT SIF OUT BT IF OUT VIDEO OUT
L001 20uH C001 6.3V 220YK C002 0.1 B C009 6.3V 470 YK
R001 100 R002 100 R004 47K R005 100K W611 D001 C006 MTZJ33B 0.1 F
R4203 1K 1/4W
FROM/TO SYNC COUNT/CONNECTOR
SWD_U SWD_V SWD_Y C_OUT Y_OUT HDR_V HDR_U HDR_Y
FROM/TO TV MICON
AFT AV2 SCL SDA
TEST_V_OUT
FROM/TO REGURATOR
SPDIF-134 AT+30V P.CON+5V DVD_AUDIO_R DVD_AUDIO_L P.CON+9V DVD_Y DVD_C GND
FROM/TO SYSCON/SERVO/TIMER
CV_OUT
FROM/TO Y/C/A/HEAD AMP
MONI_CVBS
FROM/TO Hi-Fi
SIF SWD_A_IN_R SWD_A_IN_L
FROM/TO CHROMA/PROGRESSIVE/PIN
GND S801X S801Y
C008 27P CH L002 33uH
VUV SW IC4202 NJM2584AM(TE1)
C4207 25V10 KA C4212 10P CH C4213 10P CH C4214 10P CH C4211 0.22 50V KA R4214 1M R4239 75
R4208 100 R4209 100 R4210 100
Q4201 BUFFER KTA1504S_Y_RTK
C4222 25V10 KA C4223 25V10 KA C4220 16V47 KA C4221 0.01 B C4225 25V10 KA C4224 25V10 KA R4218 1M
L4203 47uH 0305
L4204 100uH0305
C4239 6.3V 47 KA C4240 0.022 B R4220 1.8K R4223 1.5K R4222 3.3K R4224 220 R4230 100K
D AUDIO DRIVER Q4203 KTC3875S_Y_RTK
R4228 68 C4241 0.1 B B4201 W4BRH3.5X6X1.0X2
B4202 MMZ1608R102CT C4246 0.1 B C4248 47 6.3V KA
OPTICAL OS4201 OFTG038101 GND VCC INPUT
R4234 100 C4251 100P CH
R4235 3.9K R4233 3.9K C4245 470P CH C4247 470P CH
AUDIO IN COAXIAL J4204 MSP-213V2-732_NI_LF
R4219 10K 1/4W R4221 10K R4231 1K1/4W R4232 1K 1/4W
D4201 MTZJ5.6B D4202 MTZJ5.6B
C4249 100P CH R4240 75 1/4W C4250 100P CH R4241 75 1/4W
YUV IN J4202 MSP-213V1-652_NI_LF
C4252 0.1 B
REAR S IN J4203 MDC-070V-A_LF
R4238 75 1/4W
REAR AV IN J4201 MSP-213V2-432_NI_LF
C4242 470P CH C4243 470P CH R4237 75 1/4W
J2201 FRONT S IN MDC-012V1-A_LF
S_Y_IN2 S_C_IN2
R2201 75 R2207 75 R2202 75
R4242 75 R4227 3.9K 1/4W R4229 3.9K 1/4W R4225 3.9K R4226 3.9K
C4232 1 B C4233 1 B C4234 1 B C4235 1 B C4236 1 B
FRONT VIDEO JACK J2202 MTJ-032-03A-30FE FRONT_V_IN YELLOW
FRONT AUDIO L JACK J2203 MTJ-032-03A-32FE FRONT_A_IN_L WHITE
C2202 CH470P
FRONT AUDIO R JACK J2204 MTJ-032-03A-31FE FRONT_A_IN_R RED
C2203 470P CH
IC4201 AN15853B-E1 AV_SW
Vref
C4216 1 B C4217 1 B C4218 1 B C4219 1 B C4228 1 B C4237 1 B C4231 1 B C4238 1 B
L4202 47uH0305
C4201 10V10 KANP
W834 W810 BUFFER Q4202 KTC3875S_Y_RTK R4206 4.7K R4207 4.7K R4205 1K C4203 16V10 KANP C4208 25V100YK C4209 0.01 B C4210 0.01 B
C4229 1 B C4226 1 B C4230 1 B C4227 1 B
S-4 SDA SCL GND Cin Rout Yin Lout Vout BIAS Yout Vcc Cout D_SW_1 Sin2 Sin1 S-3 D_L1_Vin
C4215 1 B C4204 16V 22 KA R4211 100 R4212 100
6dB
R4202 3301/4W

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION:LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

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NOTE:THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB010
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CHROMA/PROGRESSIVE/PIN CUSHION SCHEMATIC DIAGRAM

(VCR PCB)

FROM/TO SYNC COUNT/CONNECTOR

ANALOG_Y_OUT
ANALOG_PB_OUT
ANALOG_PR_OUT
P.CON+9V_1

FROM/TO TUNER/AV

GND (S801)

FROM/TO REGULATOR

GND
P.CON+5V
P.CON+9V

FROM/TO Y/C/A/HEAD AMP

VD

FROM/TO TV MICON

SCL
SDA
E0
X-RAY

FROM/TO SOUND AMP/SURROUND

SOUND_GND
SOUND+B

FROM/TO DEFLECTION

CP601 (CP401)
C32G4701

1	SOUND+B
2	SOUND_GND
3	V_DF_OUT
4	H.OUT
5	H_DRV+B
6	X-RAY
7	EW_F/B
8	V_F/B
9	GND
10	GND
11	CENTER_DAC
12	ACL
13	ABL_SW
14	AFC
15	E0
16	EW_OUT

L608 W5T29X7.5X19

PIN CUSHION IC602 TA1317ANG

AGC FILTER, V RAMP FILTER, TC FILTER, Vin, BLK OUT, CENTER OUT, V-DF OUT, LVP IN, H-DF OUT, DIGITAL GND, SCL, SDA
Vref, CENTER DAC, EHT IN, V DRIVE, V-DC REF, V NF, Vcc, EW PWN, ANALOG GND, EW FD, EW FILTER, FBP IN

PROGRESSIVE IC IC603 TA1360ANG

1	DARK AREA DET FILTER	50	APL FILTER
2	BPH FILTER	55	Y/C Vcc
3	Y1 IN	54	VSM OUT
4	Cb1/Pb1 IN	53	ABCL IN
5	Cr1/Pr1 IN	52	Ym/P-MUTE/BLK
6	Y/C GND	51	Ys1(ANALOG OSD)
7	LIGHT AREA DET FILTER	50	Ys2(ANALOG OSD)
8	Y2 IN	49	Ys3(ANALOG RGB)
9	Cb2/Pb2 IN	48	R S/H
10	Cr2/Pr2 IN	47	G S/H
11	COLOR LIMITER	46	B S/H
12	VSM FILTER	45	Ik IN
13	H-FREQ SW1	44	RGB GND
14	SYNC IN	43	R OUT
15	VD IN	42	G OUT
16	HD IN	41	B OUT
17	SCP IN	40	RGB Vcc
18	CP OUT	39	ANALOG OSD R IN
19	DEF/DAC Vcc	38	ANALOG OSD G IN
20	AFC FILTER	37	ANALOG OSD B IN
21	H VCO	36	DAC2 (ACB PLUSE)
22	H-FREQ SW2	35	ANALOG R IN
23	H CURVE CORRECTION	34	ANALOG G IN
24	FBP IN	33	ANALOG B IN
25	DEF/DAC GND	32	I2L GND
26	H-OUT	31	SDA
27	VP OUT	30	SCL
28	DAC1(SYNC OUT)	29	I2L Vdd

BUFFER Q602 KTA1504S_Y_RTK
BUFFER Q601 KTC3875S_Y_RTK
BUFFER Q604 KTC3875S_Y_RTK
BUFFER Q603 KTC3875S_Y_RTK
HD SW Q612 KTC3875S_Y_RTK
BUFFER Q613 KTC3875S_Y_RTK
SW Q618 KRC102SRTK
BUFFER Q611 KTC3875S_Y_RTK
KTC3875S_Y_RTK Q605 BUFFER
Q606 BUFFER KTA1504S_Y_RTK
BUFFER Q607 KTA1504S_Y_RTK
Q608 BUFFER KTA1504S_Y_RTK
REMITTER Q617 KTA1504S_Y_RTK
REMITTER Q616 KTA1504S_Y_RTK
REMITTER Q615 KTA1504S_Y_RTK

FROM/TO CRT/SVM

CP602 (CP802B)
B2013H02-6P

CUT OFF(9V)	6
GND(SIGNAL)	5
R.OUT	4
G.OUT	3
B.OUT	2
CLAMP_OFF	1

FROM/TO CRT/SVM

CD603 (CP801)
C3227201

VM COIL	1
GND	2

FROM/TO TV MICON

OSD_BLK1
OSD_BLK2
OSD_R
OSD_G
OSD_B
H_SYNC
V_SYNC
PROTECT

CAUTION: DIGITAL TRANSISTOR

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

PCB010
DME022

TV MICON SCHEMATIC DIAGRAM

(VCR PCB)

EEP ROM IC 256K
IC199 AT24C256N-10SU-2.7

MICON
IC101
OEC7121A

SYSTEM RESET
IC102 PST3229NR

SYSTEM RESET
IC103 PST3229NR

RESET SW Q106
DTC114TKA

LEVEL SHIFT
Q101
2SK3018T106

LEVEL SHIFT
Q102
2SK3018T106

LEVEL SHIFT
Q104
2SK3018T106

LEVEL SHIFT
Q105
2SK3018T106

BUFFER
Q103
KTA1504S_Y_RTK

D109 MT2J5.6B
D106 MTZJ5.6B
D170 MTZJ5.6B
D107 MTZJ5.6B
D113 1SS133
D104 11EQS04
D111 11EQS04N
D112 11EQS04
D115 11EQS04
D102 11EQS04

81.TV POWER
82.CHROMA POWER

52.EXT MUTE
51.AUDIO MUTE
50.(FLASH ADD.15)
49.(FLASH ADD.14)
48.(FLASH RESET)

99.VCC(5V)
100.CVIN_MAIN
1.V.HOLD_MAIN
2.HLF_MAIN

30.NC
29.NC

CP103 A2001WR2-13P

1	GND	
2	SCL_EEP	SCL EEP
3	SDA_EEP	SDA EEP
4	IIC_OFF(TV)	IIC OFF
5	SCL	SCL
6	SDA	SDA
7	SCL1	SCL1
8	SDA1	SDA1
9	BUS OFF(VCR)	BUS OFF
10	VIDEO OUT	TEST V OUT
11	GND	
12	AUDIO OUT L	AUDIO OUT L
13	AUDIO OUT R	AUDIO OUT R

FROM/TO Hi-Fi
AUDIO_OUT_L
AUDIO_OUT_R

FROM/TO TUNER/AV
TEST_V_OUT
AFT
AV2
SDA
SCL

FROM/TO SOUND AMP/SRROUND
TV_A_MUTE
SDA
SCL
TV_POWER_H
AV5

FROM/TO IN/OUT
REC_LED
T-REC_LED
KEY_A
KEY_B
KEY_C
TV_POWER_H
REMOCON_IN

FROM/TO SYNC COUNT/CONNECTOR
AV4
3DYCS_RESET
IP_RESET
CVIN_MAIN
SDA
SCL
SDA2
SCL2
C_SYNC

FROM/TO CHROMA/PROGRESSIVE/PIN
V_SYNC
H_SYNC
OSD_B
OSD_G
OSD_R
OSD_BLK1
OSD_BLK2
PROTECT
X-RAY
E0
SDA
SCL

FROM/TO SYSCON/SERVO/TIMER
BUS_OFF
SCL1
SDA1
VCR_CS
VCR_CLK
VCR_DA_IN
VCR_DA_OUT
VCR_POWER_H

FROM/TO REGURATOR
GND
AT+5.6V
AT+3.3V
TV_POWER_FAIL
TV_POWER_H
DEGAUSS_H
TX
RX
DVD_H
CHROMA_POWER_H
P.CON+3.3V_DEGI
DVD_RESET

CAUTION: DIGITAL TRANSISTOR

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

PCB010
DME022

SYNC COUNT/CONNECTOR SCHEMATIC DIAGRAM

(VCR PCB)

FROM/TO CHROMA/PROGRESSIVE/PIN

ANALOG_Y_OUT
ANALOG_PB_OUT
ANALOG_PR_OUT
P.CON+9V_1

FROM/TO Hi-Fi

DVI_A_R
DVI_A_L
HDMI_A_R
HDMI_A_L

FROM/TO INTERFACE

CP4201 (CP3602)
IMSA-9130B-20-PT1

1	Pb(U)	
2	Y	
3	Pr(V)	
4	GND	
5	TX	NC
6	RX	NC
7	+12V	
8	DAC_A_L	
9	GND	
10	DAC_A_R	
11	GND	
12	+4V	
13	+5V	
14	AUDIO_L	
15	GND	
16	AUDIO_R	
17	GND	
18	HDMI_1/2	NC
19	V-SYNC	NC
20	H-SYNC	NC

R705 100
R706 100
R780 100
C737 0.1 B
C702 6.3V 220 YK

FROM/TO REGURATOR

P.CON+3.3V_DEGI
P.CON+9V
HDMI+4V
GND
MOTOR+12V
P.CON+5V

W863 (W017)

FROM/TO TV MICON

SDA
SCL
CVIN_MAIN
AV4
SDA2
SCL2
C_SYNC
3DYCS_RESET
IP_RESET

FROM/TO TUNER/AV

SWD_U
SWD_V
SWD_Y
Y_OUT
C_OUT
HDR_U
HDR_V
HDR_V

Y_SW IC707 NJM2533V

C771 4.0 25V10 KA
C772 4.0 25V10 KA
C782 10V 22 KANP
C778 0.01 B
C779 16V 47 KA
L707 47uH 0305
R775 15K
R776 22K
R779 470 1/4W
D704 MTZJ6.8B
BUFFER Q710 KTC3875S_Y_RTK

FROM/TO TV POWER

CP4202 (CP7202)
IMSA-9130B-13-PT1

P.CON+5V	13
GND	12
P.CON+3.3V	11
GND	10
3D_Y/C-RESET	9
SCL	8
SOFT RESET	7
SDA	6
GND	5
Y_OUT	4
GND	3
Pb_OUT	2
Pr_OUT	1

L708 47uH 0305
R759 6.8K
C773 22 35V NA
AMP Q704 KTC3875S_Y_RTK
R763 10
C777 33P CH
R785 470 1/4W
C789 0.01 B
C790 25V100 YK
D705 MTZJ11B

C704 22P CH
C701 6.3V 33 KANP
L704 6.8uH
R795 10 1/4W

CP4203 (CP7203)
IMSA-9130B-13-PT1

GND	13
VSYNC	12
V_AV	11
C(CVBS)	10
HSYNC	9
GND	8
NC HD_UP	7
Y(1)	6
GND	5
NC VD_UP	4
Pb(1)	3
GND	2
Pr(1)	1

R781 100

BUFFER Q705 KTC3875S_Y_RTK

C761 0.01 B
C763 100 25V YK
R755 470
X701 CSBLA4503KEC2F30-B0
C769 0.01 B
C770 50V1 KA
R756 6.8K
R750 100
R749 100
R757 1K
R760 1K
R764 47K
C774 1 B
C785 0.1 B

IC705 TA1383FG

5.0	5.0	5.0	0	0	5.2	6.4	0 NC	0 NC	1.0	0 NC	1.0	3.5	2.0 NC	9.0															
15	14	13	12	11	10	9	8	7	6	5	4	3	2	1															
VD_OUT	SCL	SDA	ADDRESS	GND1	HVCO	AFC_FILTER	MONI_OUT	HDMI_HD	D_SYNC2_IN	HDMI_VD	Y2_IN	SYNC_OUT	Y1_IN	VCC1(9V)															
0.7 NC	5.0	0	1.0 NC	2.0	4.0	3.5	3.5	2.8	5.1	0 NC	2.0	1.0	1.0	0.7															
16	17	18	19	20	21	22	23	24	25	26	27	28	29	30															
C1_IN	HD_OUT	DIGI_GND	C2_IN	APC_FILTER	3.58X'TAL	C_OUT	Cb_OUT	Y_OUT	VCC2(5V)	CW_OUT	GND2	C_IN	Cb_IN	D_SYNC1_IN															

SYNCCOUNT

L703 47uH 0305
R748 4.7K
R751 4.7K
R752 33K
C765 50V 0.22 KA
C764 0.0022 B
C766 12P CH
X702 3.579545MHz 100CT3R536
C775 0.01 B
C776 6.3V 1000 YK
C786 0.1 B
C787 0.1 B
C788 0.1 B
R784 10K
R782 100
R783 100
R772 1K
C799 330P B

L710 47uH 0305
R769 10K
C781 10 50V NA
AMP Q709 KTC3875S_Y_RTK
C791 0.01 B
C792 25V100 YK
R778 10
R770 12K
R786 470
R767 10K
C780 10 50V NA
AMP Q708 KTC3875S_Y_RTK
R777 10
R768 12K
R787 470

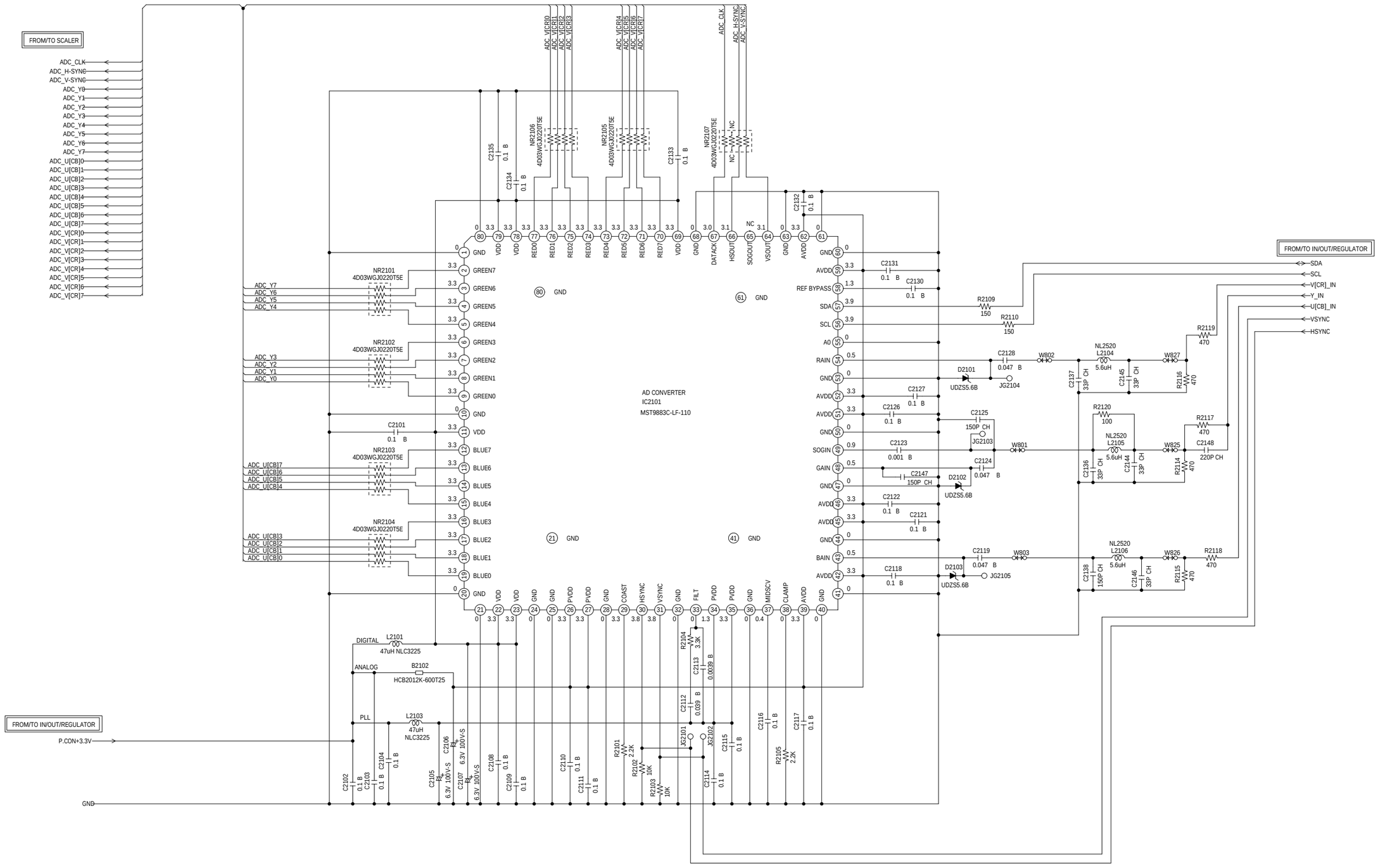
PCB010
DME022

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

ANALOG/DIGITAL CONVERTER SCHEMATIC DIAGRAM

(SCALER PCB)



NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

PCBDS0
CED020

SCALER SCHEMATIC DIAGRAM

(SCALER PCB)

FROM/TO ANALOG/DIGITAL CONVERTER

ADC_Y0
ADC_Y1
ADC_Y2
ADC_Y3
ADC_Y4
ADC_Y5
ADC_Y6
ADC_Y7
ADC_U[CB]0
ADC_U[CB]1
ADC_U[CB]2
ADC_U[CB]3
ADC_U[CB]4
ADC_U[CB]5
ADC_U[CB]6
ADC_U[CB]7
ADC_V[CR]0
ADC_V[CR]1
ADC_V[CR]2
ADC_V[CR]3
ADC_V[CR]4
ADC_V[CR]5
ADC_V[CR]6
ADC_V[CR]7
ADC_CLK
ADC_H-SYNC
ADC_V-SYNC

FROM/TO DIGITAL COMB

3D_Y/C_656OUT-0
3D_Y/C_656OUT-1
3D_Y/C_656OUT-2
3D_Y/C_656OUT-3
3D_Y/C_656OUT-4
3D_Y/C_656OUT-5
3D_Y/C_656OUT-6
3D_Y/C_656OUT-7
3D_Y/C_HD-OUT
3D_Y/C_VD-OUT
3D_Y/C_656-CLK
3D_Y/C_ODD/EVE

3D_Y/C_HD-OUT
3D_Y/C_VD-OUT
3D_Y/C_ODD/EVE
3D_Y/C_6560OUT-7
3D_Y/C_6560OUT-6
3D_Y/C_6560OUT-5
3D_Y/C_6560OUT-4
3D_Y/C_6560OUT-3
3D_Y/C_6560OUT-2
3D_Y/C_6560OUT-1
3D_Y/C_6560OUT-0
3D_Y/C_656-CLK

X3901 13.5MHz
C3951 27P CH
C3950 27P CH
R3933 15K
R3915 1M 5%
R3913 270 +-1%
C3945 0.1 B
C3943 1 16V 10V-S
C3942 0.1 B
C3948 0.1 B

ANALOG_V_OUT
ANALOG_Y_OUT
ANALOG_U_OUT
J3901
J3902
J3903
51
50
49
R3912 120 +-1%
R3911 68 +-1%
R3910 120 +-1%

R3901 10K
R3902 10K
R3917 10K
R3918 10K
R3920 10K
C3953 0.1 B
C3952 0.1 B
C3944 0.1 B
C3941 0.1 B
C3940 0.1 B
C3939 0.1 B
C3938 0.1 B
C3937 0.1 B
C3936 0.1 B
C3935 0.1 B
C3934 0.1 B
C3933 0.1 B
C394470.1 B
C394600.1 B

ADC_H-SYNC
ADC_V-SYNC
ADC_CLK
W806
C3901 0.1 B
C3902 0.1 B
C3903 0.1 B
C3904 0.1 B
C3905 47P CH
C3906 47P CH
C3907 0.1 B
C3972 0.1 B
R3907 470
R3905 470
SCL
SDA
SOFT_RESET

IN_CLK1_PORT1
HSYNC2_PORT1
VSYNC2_PORT1
FIELD ID2_PORT1
VDD1 (3.3V)
VSS
IN_CLK2_PORT1
B/Cb/D1_0
B/Cb/D1_1
B/Cb/D1_2
B/Cb/D1_3
B/Cb/D1_4
VDDcore1 (1.8V)
VSScore
B/Cb/D1_5
B/Cb/D1_6
B/Cb/D1_7
R/Cr/Cb Cr_0
R/Cr/Cb Cr_1
R/Cr/Cb Cr_2
R/Cr/Cb Cr_3
R/Cr/Cb Cr_4
R/Cr/Cb Cr_5
R/Cr/Cb Cr_6
R/Cr/Cb Cr_7
G/Y/Y_0
VDD2 (3.3V)
VSS
G/Y/Y_1
G/Y/Y_2
G/Y/Y_3
G/Y/Y_4
VDDcore2 (1.8V)
VSScore
G/Y/Y_5
G/Y/Y_6
G/Y/Y_7
IN_SEL
TEST
DEV_ADDR1
DEV_ADDR0
SCLK
SDATA
RESET_N
VDD3 (3.3V)
VSS

1 HSYNC1_PORT1
2 VSYNC1_PORT1
3 FIELD ID1_PORT1
206 FIELD ID_PORT2
207 VSYNC_PORT2
208 HSYNC_PORT2

IC3901
FLI2301-LF-BD
SCALER

50 SDRAM DATA(0)
51 SDRAM DATA(1)
52 SDRAM DATA(2)
53 SDRAM DATA(3)
54 SDRAM DATA(4)
55 SDRAM DATA(5)
56 SDRAM DATA(6)
57 SDRAM DATA(7)

101 SDRAM ADDR(2)
102 SDRAM ADDR(1)
103 SDRAM ADDR(0)
104 SDRAM WEN
105 SDRAM RASN
106 SDRAM CASN
107 SDRAM BA1

154 G/Y/Y_OUT_6
155 G/Y/Y_OUT_7
156 OE
157 PLL_PVDD (1.8V)
158 PLL_PVSS
159 AVSS_PLL_BE1
160 AVDD_PLL_BE1 (1.8V)

G/Y/Y_OUT_5
G/Y/Y_OUT_4
G/Y/Y_OUT_3
G/Y/Y_OUT_2
G/Y/Y_OUT_1
G/Y/Y_OUT_0
R/V/Pr_OUT_7
R/V/Pr_OUT_6
R/V/Pr_OUT_5
R/V/Pr_OUT_4
R/V/Pr_OUT_3
R/V/Pr_OUT_2
R/V/Pr_OUT_1
R/V/Pr_OUT_0
B/U/Pb_OUT_7
B/U/Pb_OUT_6
B/U/Pb_OUT_5
B/U/Pb_OUT_4
B/U/Pb_OUT_3
B/U/Pb_OUT_2
B/U/Pb_OUT_1
B/U/Pb_OUT_0
CLKOUT
CTLOUT4
CTLOUT3
CTLOUT2
CTLOUT1
CTLOUT0
TEST OUT1
TEST OUT0
TEST3
SDRAM CLKIN
SDRAM CLKO
SDRAM DQM
SDRAM CSN
SDRAM BA0
C3932 0.1 B
C3931 0.1 B
C3930 0.1 B
C3929 0.1 B
C3928 0.1 B
W807
I63904
I63905
R3908 100
SDRAM_CLK

NR3912 4D03WGJ0000T5E
DQM
CSN
BA0
BA1

NR3913 4D03WGJ0000T5E
CASN
RASN
WEN
NC

C3923 0.1 B
C3924 0.1 B
C3925 0.1 B
C3926 0.1 B
C3927 0.1 B

NR3901 4D03WGJ0000T5E
NR3902 4D03WGJ0000T5E
NR3903 4D03WGJ0000T5E
NR3904 4D03WGJ0000T5E
NR3905 4D03WGJ0000T5E
NR3906 4D03WGJ0000T5E
NR3907 4D03WGJ0000T5E
NR3908 4D03WGJ0000T5E
NR3909 4D03WGJ0000T5E
NR3910 4D03WGJ0000T5E
NR3911 4D03WGJ0000T5E

DAT0 DAT1 DAT2 DAT3 DAT4 DAT5 DAT6 DAT7 DAT8 DAT9 DAT10 DAT11 DAT12 DAT13 DAT14 DAT15 DAT16 DAT17 DAT18 DAT19 DAT20 DAT21 DAT22 DAT23 DAT24 DAT25 DAT26 DAT27 DAT28 DAT29 DAT30 DAT31
ADDR10 ADDR9 ADDR8 ADDR7 ADDR6 ADDR5 ADDR4 ADDR3 ADDR2 ADDR1 ADDR0

FROM/TO IN/OUT/REGULATOR

P.CON+1.8V
P.CON+3.3V
DIGITAL
ANALOG
L3901 47uH
L3907 47uH
W817
W821
C3908 0.01 B
C3909 0.1 B
C3910 6.3V 100V-S
C3911 0.1 B
C3917 6.3V 100V-S
C3918 0.1 B
C3919 0.1 B
C3920 6.3V 100V-S
C3921 0.1 B
C3922 6.3V 100V-S
GND

FROM/TO SDRAM

DATA0 DATA1 DATA2 DATA3 DATA4 DATA5 DATA6 DATA7 DATA8 DATA9 DATA10 DATA11 DATA12 DATA13 DATA14 DATA15 DATA16 DATA17 DATA18 DATA19 DATA20 DATA21 DATA22 DATA23 DATA24 DATA25 DATA26 DATA27 DATA28 DATA29 DATA30 DATA31
ADDR0 ADDR1 ADDR2 ADDR3 ADDR4 ADDR5 ADDR6 ADDR7 ADDR8 ADDR9 ADDR10
BA0 BA1 WEN CASN RASN CSN DQM SDRAM_CLK

FROM/TO IN/OUT/REGULATOR

ANALOG_V_OUT
ANALOG_Y_OUT
ANALOG_U_OUT
SOFT_RESET
SCL
SDA

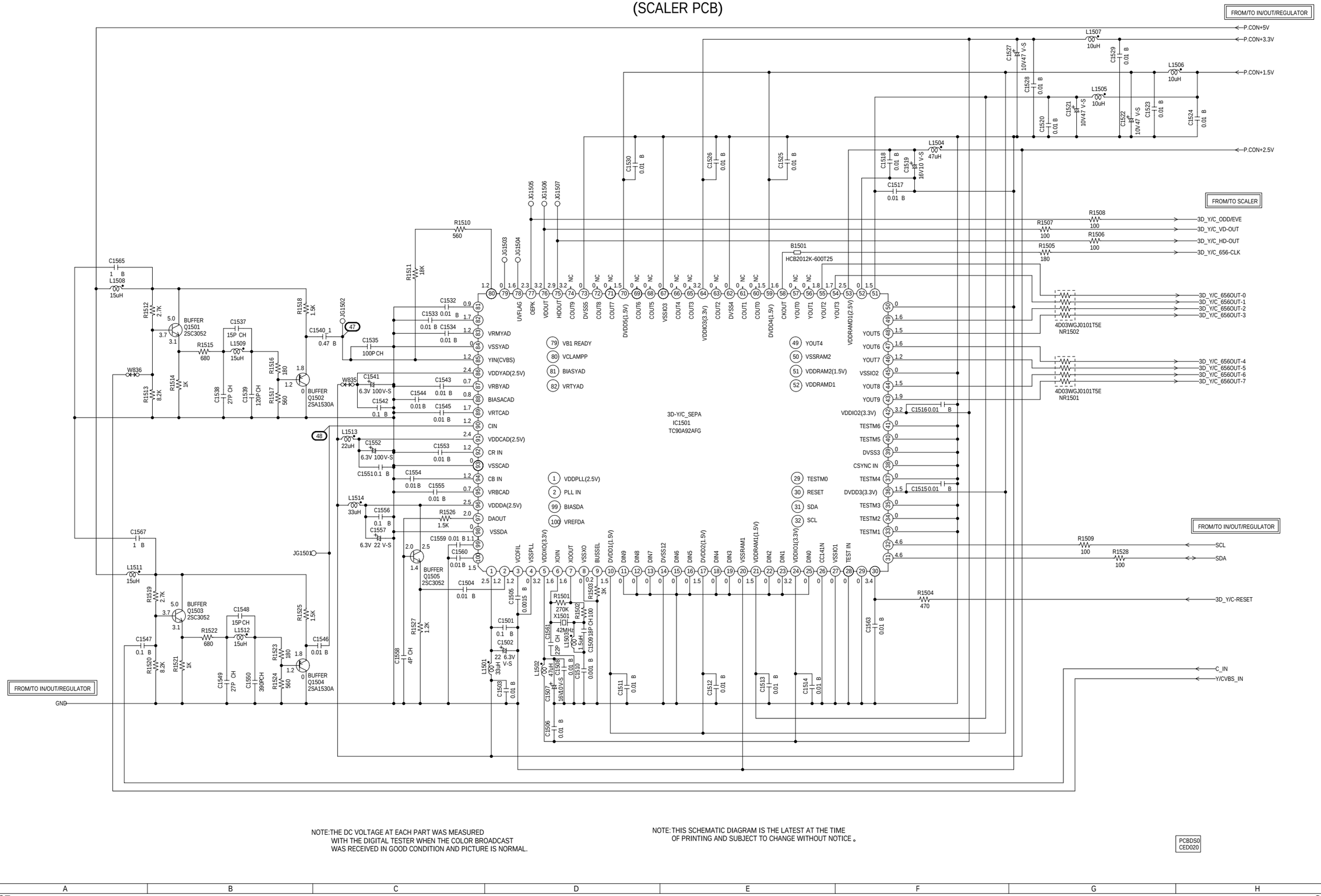
NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

PCBDS0
CED020

DIGITAL COMB SCHEMATIC DIAGRAM

(SCALER PCB)



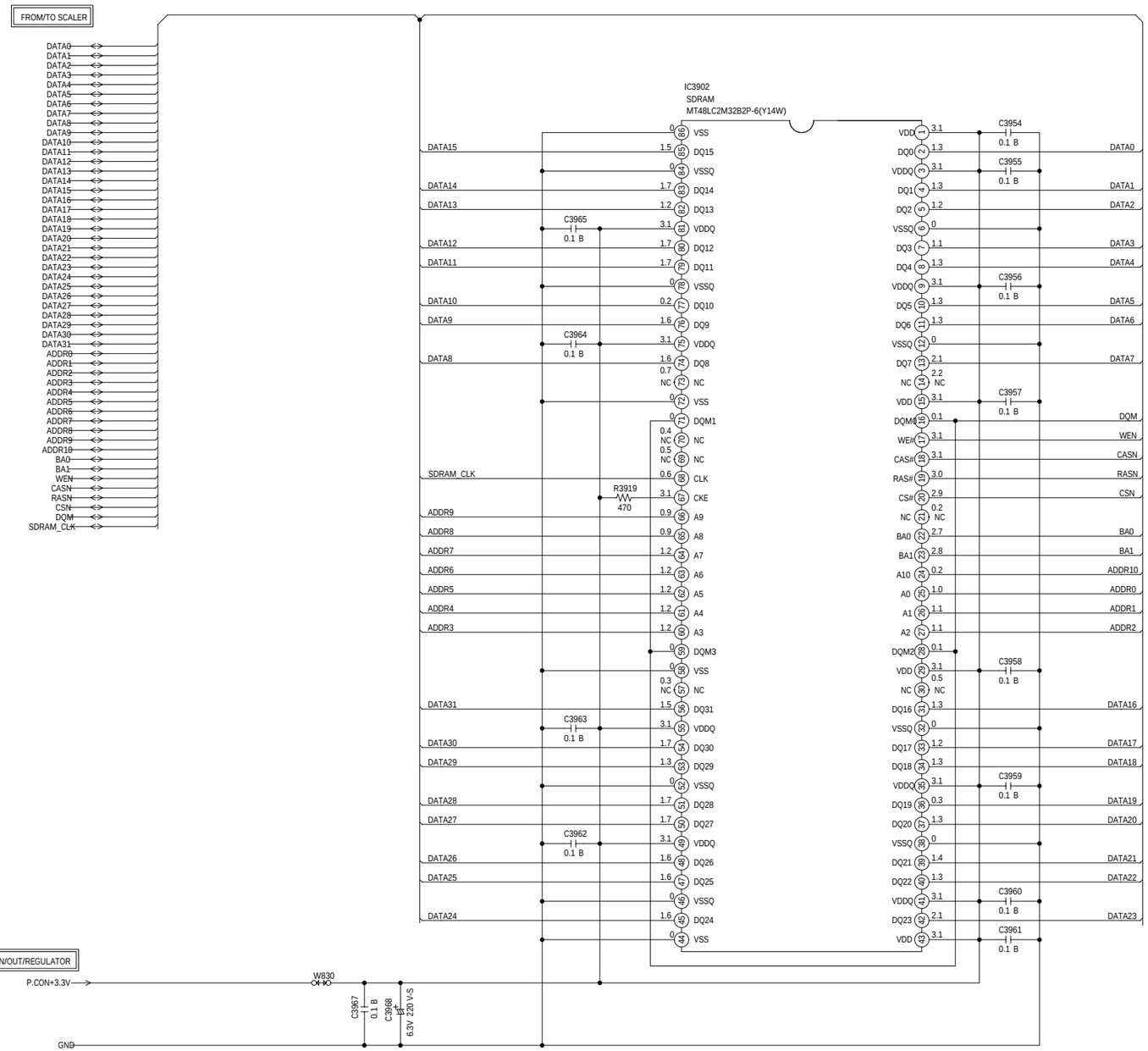
NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE:THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

PCBDS0
CED020

SDRAM SCHEMATIC DIAGRAM

(SCALER PCB)


FROM/TO SCALER
DATA0 DATA1 DATA2 DATA3 DATA4 DATA5 DATA6 DATA7 DATA8 DATA9 DATA10 DATA11 DATA12 DATA13 DATA14 DATA15 DATA16 DATA17 DATA18 DATA19 DATA20 DATA21 DATA22 DATA23 DATA24 DATA25 DATA26 DATA27 DATA28 DATA29 DATA30 DATA31
ADDR0 ADDR1 ADDR2 ADDR3 ADDR4 ADDR5 ADDR6 ADDR7 ADDR8 ADDR9 ADDR10
BA0 BA1 WEN CASN RASN CSN DQM SDRAM_CLK
IC3902
SDRAM
MT48LC2M32B2P-6(Y14W)
VSS DQ15 VSSQ DQ14 DQ13 VDDQ DQ12 DQ11 VSSQ DQ10 DQ9 VDDQ DQ8 NC VSS DQM1 NC NC CLK CKE A9 A8 A7 A6 A5 A4 A3 DQM3 VSS NC DQ31 VDDQ DQ30 DQ29 VSSQ DQ28 DQ27 VDDQ DQ26 DQ25 VSSQ DQ24 VSS
VDD DQ0 VDDQ DQ1 DQ2 VSSQ DQ3 DQ4 VDDQ DQ5 DQ6 VSSQ DQ7 NC VDD DQM0 WE# CAS# RAS# CS# NC BA0 BA1 A10 A0 A1 A2 DQM2 VDD NC DQ16 VSSQ DQ17 DQ18 VDDQ DQ19 DQ20 VSSQ DQ21 DQ22 VDDQ DQ23 VDD
C3954 C3955 C3956 C3957 C3958 C3959 C3960 C3961 C3962 C3963 C3964 C3965
0.1 B
R3919 470
FROM/TO IN/OUT/REGULATOR
P.CON+3.3V
GND
W830
C3967 0.1 B
C3968 6.3V 220 V-S

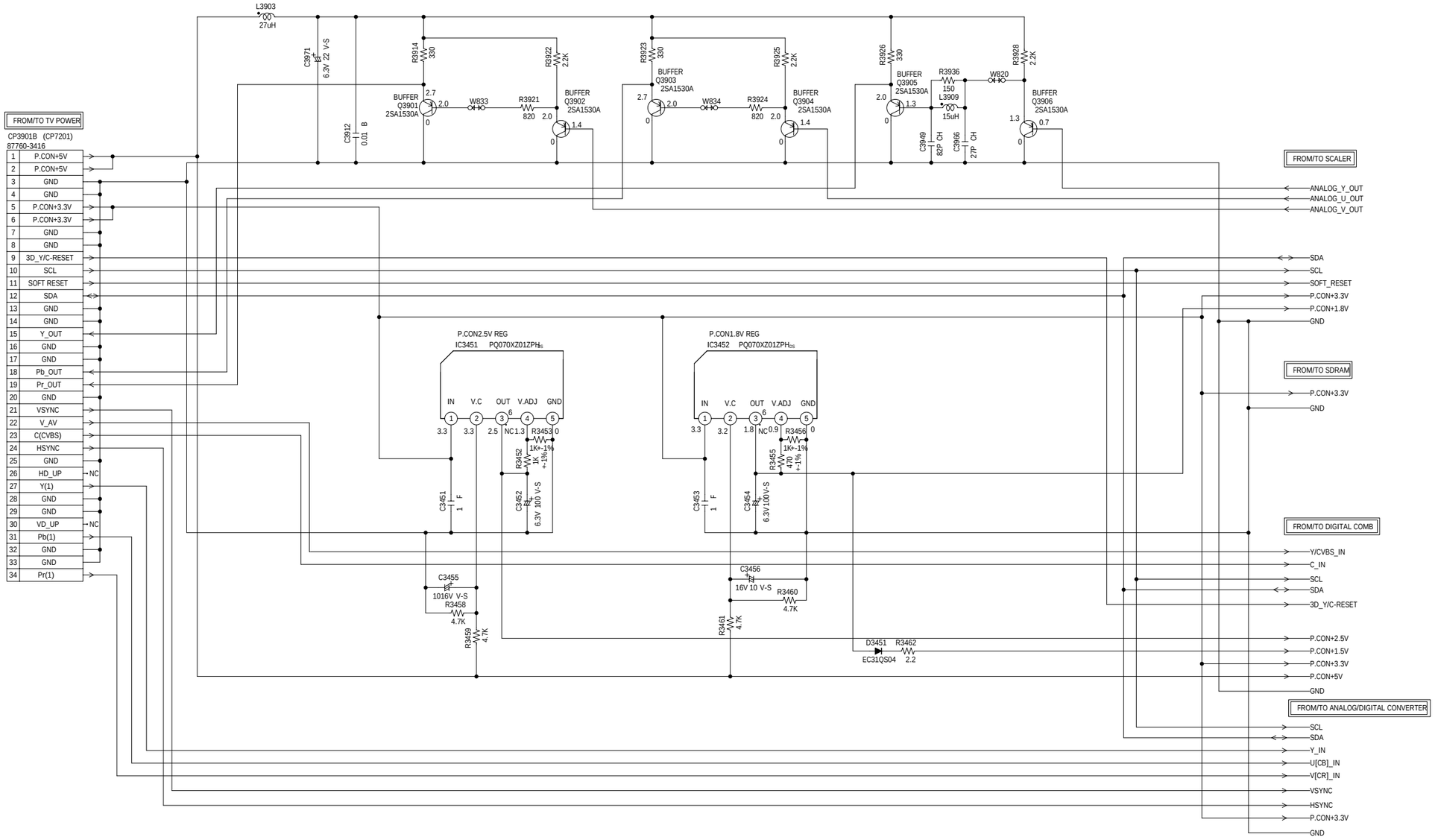
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

PCBDS0
CED020

IN/OUT/REGULATOR SCHEMATIC DIAGRAM

(SCALER PCB)

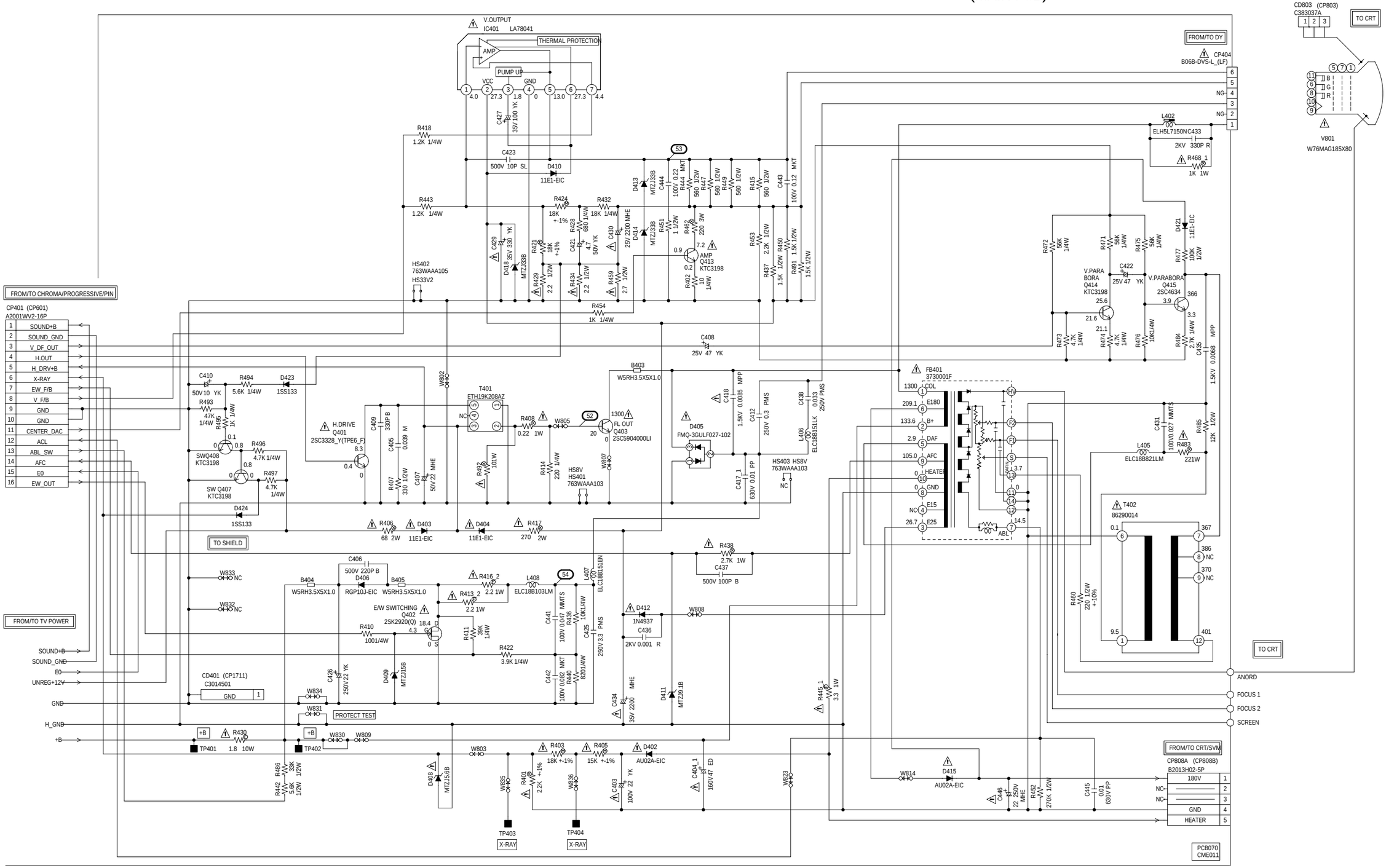


NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

PCBDS0
CED020

DEFLECTION SCHEMATIC DIAGRAM (MAIN PCB)



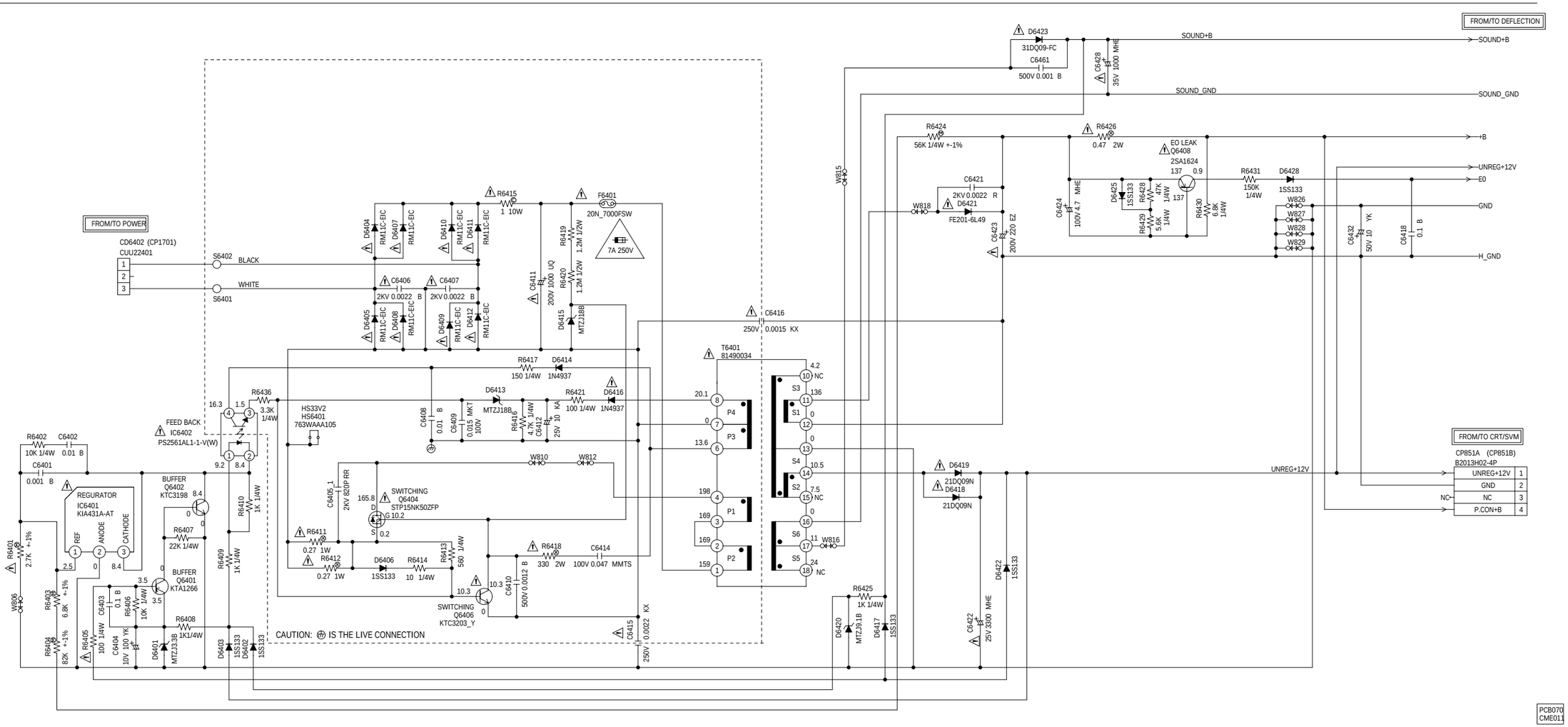
NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

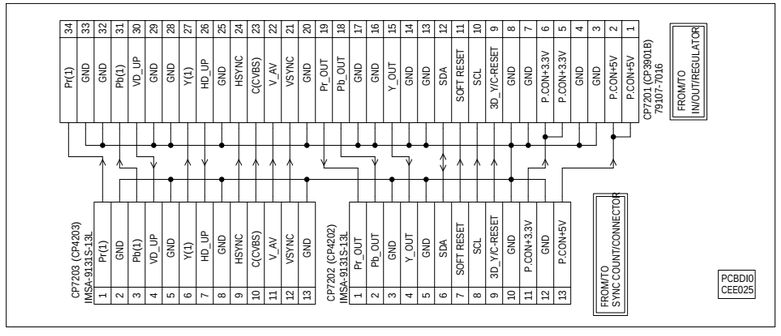
CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

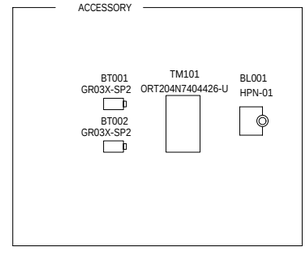
TV POWER SCHEMATIC DIAGRAM (MAIN PCB)



(CONNECTOR PCB)


CP7203 (CP4203) IMSA-9131S-13L
Pr(1) GND Pb(1) VD_UP GND Y(1) HD_UP GND HSYNC C(CVBS) V_AV VSYNC GND
CP7202 (CP4202) IMSA-9131S-13L
Pr_OUT GND Pb_OUT GND Y_OUT GND SDA SCFT RESET SCL 3D_Y/C-RESET GND P.CON+3.3V GND P.CON+5V
FROM/TO SYNC.COUNT/CONNECTOR
CP7201 (CP3801B) 79107-7016
FROM/TO IN/OUT/REGULATOR
PCBDI01 CEE025

ACCESSORY



7A 250V

CAUTION: FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 7A 250V(F6401)

ATTENTION: POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 7A 250V(F6401)

CAUTION: F6401 IS MANUFACTURED BY SKYGATE CO.,LTD, TYPE 20N.

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

CAUTION: SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY, USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THE RESISTOR MARKED F IS FUSE RESISTOR. THE ALUMI ELECTROLYTIC CAPACITOR MARKED NP IS NON POLAR ONE.

CRT/SVM SCHEMATIC DIAGRAM (CRT PCB)

CRT BLOCK

FROM/TO CHROMA/PROGRESSIVE/PIN

CP802B (CP602)
52147-0610

6	CUT_OFF(9V)
5	GND(SIGNAL)
4	R.OUT
3	G.OUT
2	B.OUT
1	CLAMP_OFF

GREEN AMP Q801 2SC4075D/E
GREEN AMP Q810 KTC3198
RED AMP Q802 2SC4075D/E
RED AMP Q811 KTC3198
BLUE AMP Q803 2SC4075D/E
BLUE AMP Q812 KTC3198
BUFFER Q814 KTC3198
BUFFER Q804 KTA1266
D801 1SS133
D802 1SS133
D803 1SS133
D807 1SS133
D808 1SS133
D809 1SS133
HS801 HS6S 763WAA0309
HS802 HS6S 763WAA0309
HS803 HS6S 763WAA0309
TP804
TP805
TP806
J801_1 ISDW03S-F
W881
W883
W874
W878

FROM/TO DEFLECTION

CP808B (CP808A) B2013H02-5P

5	HEATER
4	GND
3	NC
2	NC
1	180V

CP803 (CD803) A2361WV2-3P

3	GND
2	GND
1	GND

FOCUS 2
FOCUS 1

CP804 005P-2100

1	SCREEN

FROM/TO CHROMA/PROGRESSIVE/PIN

CP801 (CD603) A2001WV2-2P

2	GND
1	VM COIL

SVM BLOCK

PCB110
CCE007

FROM/TO TV POWER

CP851B (CP851A) B2013H02-4P

UNREG+12V	1
GND	2
NC	3
P.CON+B	4

SWITCHING Q855 KTC3198
SWTCHING Q856 KTC3198
SWITCHING Q858 2SA2140
SWTCHING Q857 KTA1266
SWTCHING Q859 2SC5993
AMP Q860 KTC3198
AMP Q852 KTC3198
AMP Q853 2SC752(G)TM_Y
BUFFER Q854 KTC3198
D853 1SS133
D854 1SS133
D855 1SS133
D856 1SS133
HS551 HS851 763WSA0029
B851 W5RH3.5X5X1.0
B852 W5RH3.5X5X1.0
B853 W5RH3.5X5X1.0

FROM/TO VM COIL

CP852 (CP853) A2001WV2-3P

VM1	1
NC	2
VM2	3

(OPERATION PCB)

PCB270
CEE028

POWER SW2258 EVQ21505R
SKIP FF SW2257 EVQ21505R
PLAY SW2256 EVQ21505R
STOP SW2255 EVQ21505R
SKIP REW SW2254 EVQ21505R
VOL UP SW2253 EVQ21505R
VOL DOWN SW2252 EVQ21505R
OPEN/CLOSE SW2251 EVQ21505R

R2256 1K 1/4W
R2255 560 1/4W
R2254 5.6K 1/4W
R2253 1.8K 1/4W
R2252 1K 1/4W
R2251 560 1/4W

FROM/TO IN/OUT

CD2251 (CP2201) CU230702

GND	3
KEY-C	2
KEY-A	1

(VM COIL PCB)

PCBD80
CEE026

FROM/TO CRT/SVM

CP853 (CP852) B2013H02-3P

1	
NC	2
3	

CD852_1 CU232001

1	1
2	2
3	3

FROM/TO VM COIL

S853
S854

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

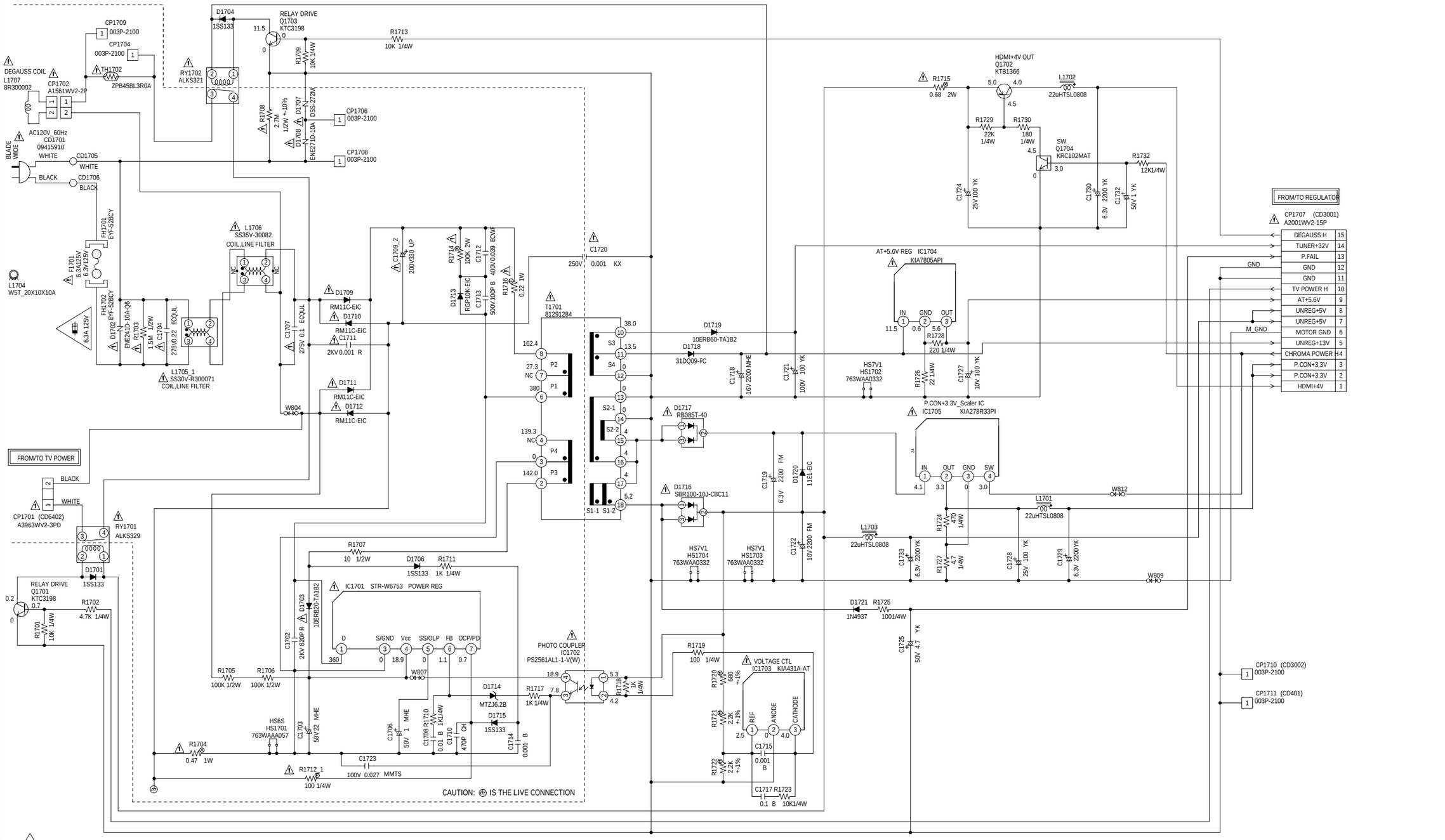
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

POWER SCHEMATIC DIAGRAM

(POWER PCB)



CAUTION :FOR CONTINUED PROTECTION AGAINST FIRE HAZARD, REPLACE ONLY WITH THE SAME TYPE FUSE 6.3A 125V(F1701).

ATTENTION :POUR UNE PROTECTION CONTINUE LES RISQUES D'INCEIE N'UTILISER QUE DES FUSIBLE DE MEME TYPE 6.3A 125V(F1701).

CAUTION :SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION :LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

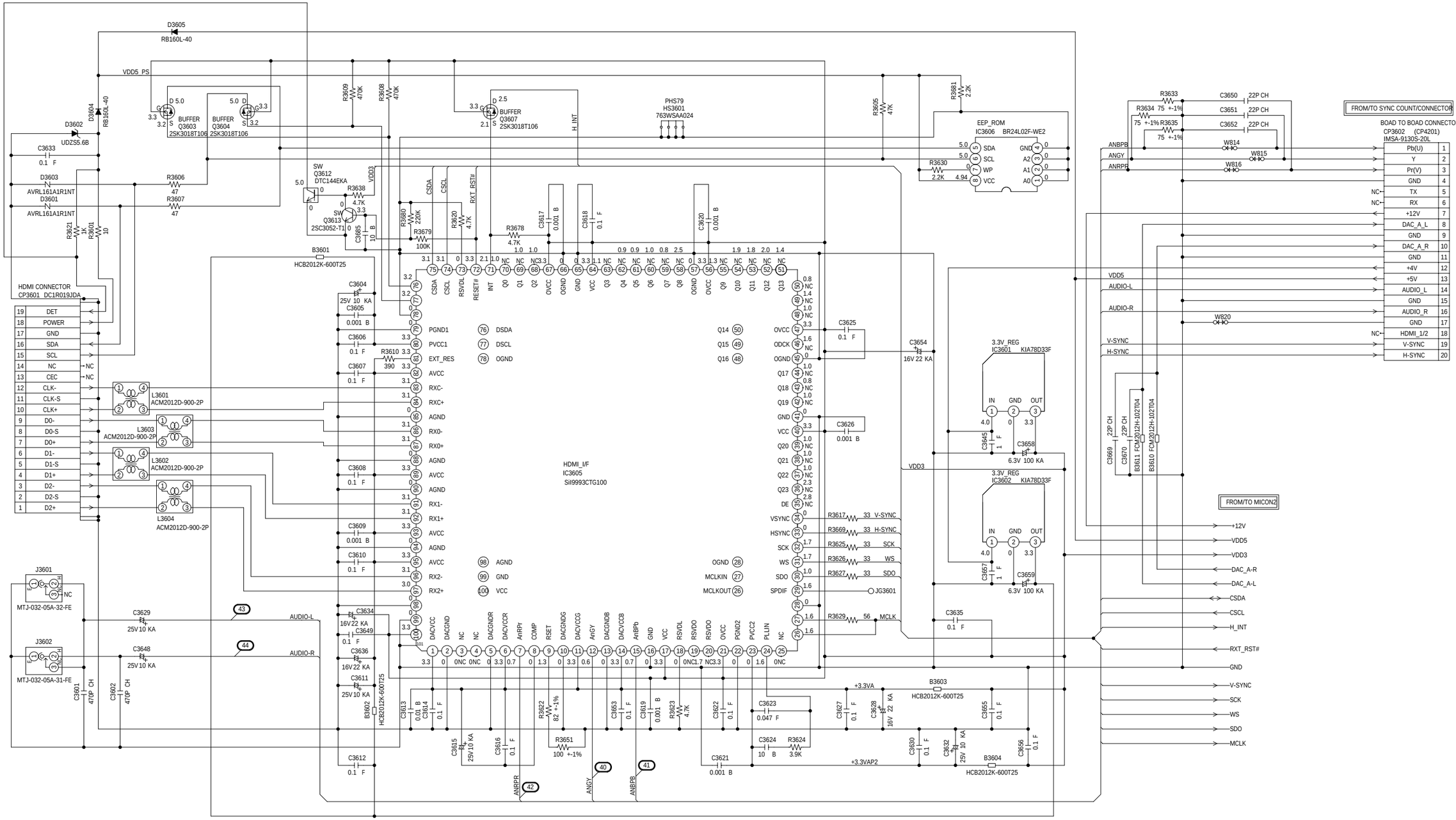
NOTE: THE DC VOLTAGE EACH PART WAS MEASURED WITH THE DIGITAL TESTER DURING PLAYBACK.

CAUTION: DIGITAL TRANSISTOR

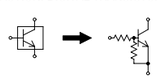
PCB240
CEE024

INTERFACE SCHEMATIC DIAGRAM

(HD-MI PCB)



CAUTION: DIGITAL TRANSISTOR



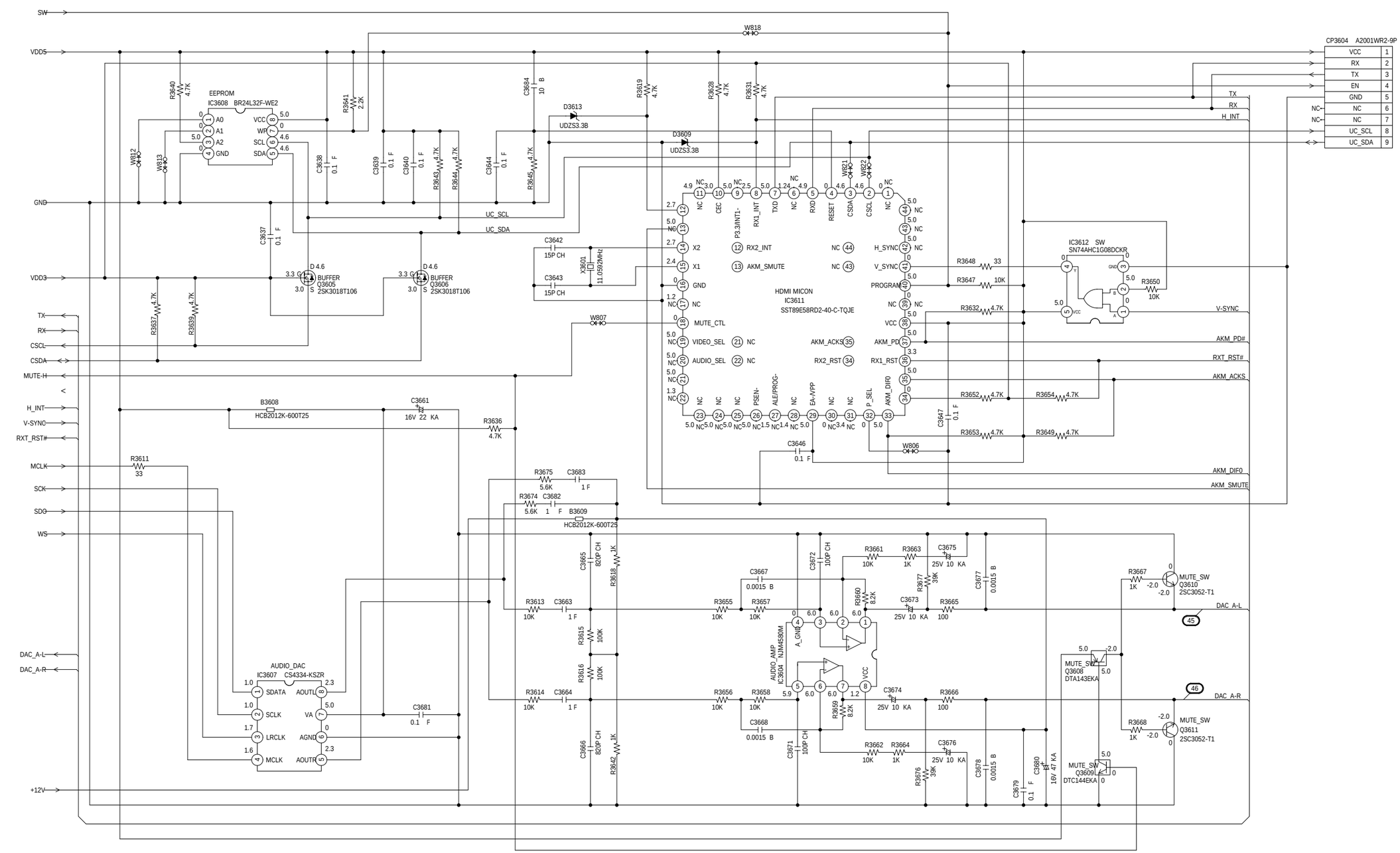
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE:THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

MICON2 SCHEMATIC DIAGRAM

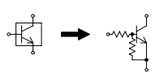
(HD-MI PCB)

FROM/TO INTERFACE

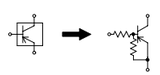


CP3604 A2001WR2-9P	
VCC	1
RX	2
TX	3
EN	4
GND	5
NC	6
NC	7
UC_SCL	8
UC_SDA	9

CAUTION: DIGITAL TRANSISTOR



CAUTION: DIGITAL TRANSISTOR



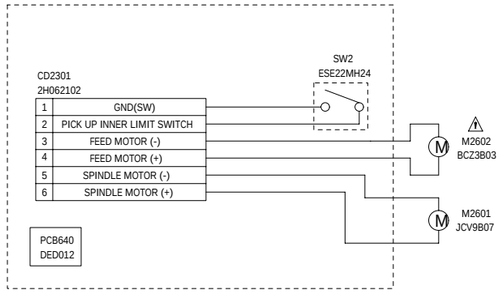
NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

NOTE: THE DC VOLTAGE AT EACH PART WAS MEASURED WITH THE DIGITAL TESTER WHEN THE COLOR BROADCAST WAS RECEIVED IN GOOD CONDITION AND PICTURE IS NORMAL.

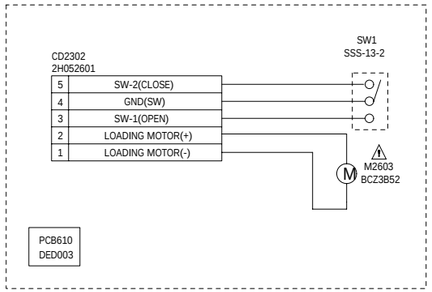
PCBDJ0
CED011

LOADING MOTOR/SW SCHEMATIC DIAGRAM

(SW PCB)



(LOADING MOTOR PCB)



NOTE: THIS SCHEMATIC DIAGRAM IS THE LATEST AT THE TIME
OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE。

INTERCONNECTION DIAGRAM

TU001
J4204 AUDIO IN COAXIAL
OS4201 OPTICAL
J2201 FRONT S IN
J4203 REAR S-IN JACK
J4201 REAR AV IN JACK
J4202 YUV IN
HDMI PCB PCBDJ0 CED011
DVI JACK J3602
DVI JACK J3601
OPERATION PCB PCB270 CEE028
SPEAKER 8 OHM SP351
SPEAKER 8 OHM SP352
COMMAND TRANSMITTER TM101
OS2201
FULL ERASE HEAD ASS'Y H5002
HALL SENSOR
MAIN COIL
ROTOR MAGNET
MR FG SENSOR
HALL VCC
HALL IN
OUT SWITCH LOGIC
CAPSTAN DD UNIT M2001
LOADING MOTOR M101
FRONT VIDEO JACK J2202
FRONT AUDIO L JACK J2203
FRONT AUDIO R JACK J2204
UN4001 CYLINDER UNIT
HI-FI HEAD
SP HEAD
EP/LP HEAD
HEAD AUDIO CONTROL ASS'Y H5001
AUDIO
CONTROL
AE
DVD DRIVE DM-3
OPTICAL PICK-UP
SPINDLE MOTOR
SLED,LOADING MOTOR
FG SENSER
DVD PCB PCB130 DME028
VCR PCB PCB010 DME022
MEMORY CARD PCB PCBDM0 DED022

CP3601

1	D2+
2	D2-S
3	D2-
4	D1+
5	D1-S
6	D1-
7	D0+
8	D0-S
9	D0-
10	CLK+
11	CLK-S
12	CLK-
13	CEC
14	NC
15	SCL
16	SDA
17	GND
18	POWER
19	DET

CP3604: VCC, RX, TX, EN, GND, NC, NC, UC_SCL, UC_SDA

CP3602: Pb(U), Y, Pr(V), GND, TX, RX, +12V, DAC_A_L, GND, DAC_A_R, GND, +4V, +5V, AUDIO-L, GND, AUDIO-R, GND, HDMI_1/2, V-SYNC, H-SYNC

CP4201: Pb(U), Y, Pr(V), GND, TX, RX, +12V, DAC_A_L, GND, DAC_A_R, GND, +4V, +5V, AUDIO_L, GND, AUDIO_R, GND, HDMI_1/2, V-SYNC, H-SYNC

CD2251 / CP2201: KEY-A, KEY-C, GND (WIRE)

CD352 / CP303: SOUND L+, SOUND L-, SOUND R-, SOUND R+

CP4503: FE HEAD(HOT), FE HEAD(GND) (WIRE)

CP3001

1	CAP FG
2	CAP VCO
3	VCC
4	CAP.M F/R
5	I LIMIT
6	MOTOR GND
7	GND
8	LD/CY VCO
9	CAP CTL
10	LDM CTL
11	CYL FG/PG
12	CYL CTL

CP4501: HF1 (R), HF COM, HF2 (L), SP-CH1 (R), SP COM, SP-CH2 (L), EP/LP-CH1 (R), EP/LP COM, EP/LP-CH2 (L)

CP4502: AUDIO REC, AUDIO PB, CTL+, CTL-, AE HEAD(+), AE HEAD(-)

CD4501 FFC

CP2601

1	GND
2	F
3	Vref
4	VCC
5	E
6	D
7	C
8	SW1(DVD/CD)
9	VRF(RF OUT)
10	B
11	A
12	VR(DVD)
13	VR COM
14	VR(CD)
15	GND
16	LD(CD)
17	PD
18	LD(DVD)
19	GND
20	NC
21	T DRV
22	T RTN
23	F DRV
24	F RTN

CP2602

1	CLOSE
2	GND(D)
3	OPEN
4	LD+
5	LD-

CP2603

1	SP1+
2	SP1-
3	SLD+
4	SLD-
5	LIMIT SW
6	SW(GND)

CD4002 / CP8001

GND(D)	GND(D)
GND(D)	GND(D)
TX	TX
RX	RX
GND(M)	GND(M)
P.CON+9V	P.CON+9V
P.CON+A5V	P.CON+A5V
DVD+3.8V	DVD+3.8V
DVD+3.8V	DVD+3.8V
GND(A)	GND(A)
SPDIF	SPDIF

CP8101_3 / CD8101 / CP8002

CVBS		12 CVBS
GND		11 GND
C		10 C
GND		9 GND
Y		8 Y
GND		7 GND
AUDIO-L		6 AUDIO-L
GND		5 GND
AUDIO-R		4 AUDIO-R
ZERO		3 ZERO
DVD RESET		2 DVD RESET
GND		1 GND

CD3003: GND

CP4002: VCC33, HD3, HD4, HD5, HD6, HD7, FCUIF31, FCUIF35, GND, RD, WR, CARD ON, FCUIF32, FCUIF36, HA1, GND, HA0, HD0, HD1, HD2, SW WP, FCUIF34, FCUIF37, C-CARD_DETECT

CP9604: VCC33, HD3, HD4, HD5, HD6, HD7, FCUIF31, FCUIF35, GND, RD, WR, CARD ON, FCUIF32, FCUIF36, HA1, GND, HA0, HD0, HD1, HD2, SW WP, FCUIF34, FCUIF37, CARD_DETECT

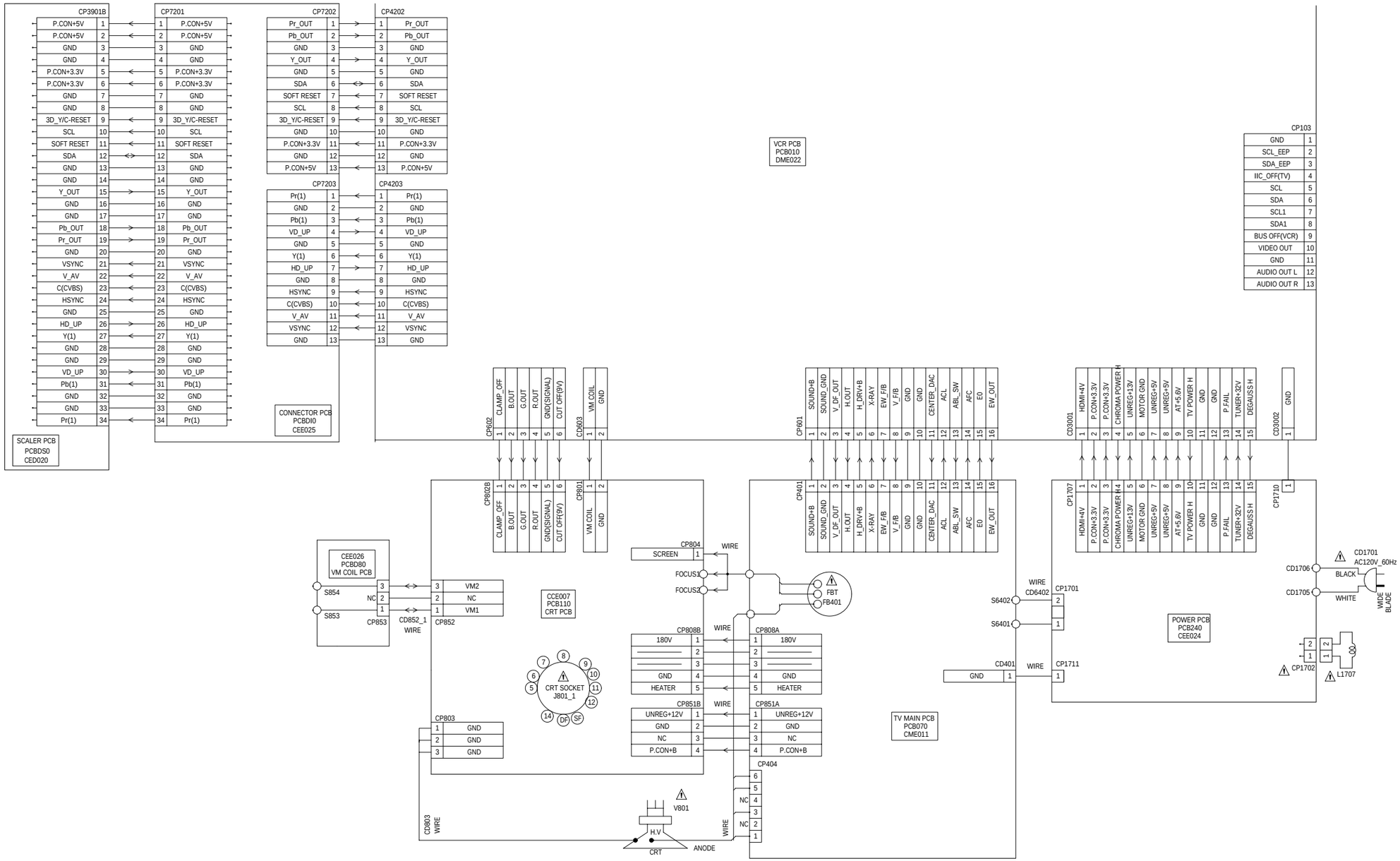
CP9603: CD, GND, RI-B, -RE, -CE, CLE, ALE, -WE, -WP, GND, D0, D1, D2, D3, D4, D5, D6, D7, VCC, VCC, CD/DAT3, CMD, VSS, VDD, CLK, VSS, DAT0, DAT1, DAT2, VSS, BS, VCC, SDI0, RESERVED, INS, RESERVED, SCLK, VCC, VSS, SDI/CD, SDI/COM, SDI/WP

CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

ATTENTION:LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

INTERCONNECTION2 DIAGRAM



CAUTION SINCE THESE PARTS MARKED BY ⚠ ARE CRITICAL FOR SAFETY,USE ONES DESCRIBED IN PARTS LIST ONLY 。

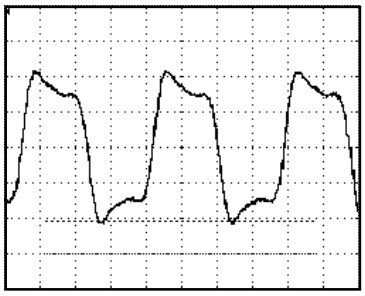
ATTENTION: LES PIECES REPAREES PAR UN ⚠ ETANT DANGEREUSES AN POINT DE VUE SECURITE N'UTILISER QUE CELLS DECRITES DANS LA NOMENCLATURE DES PIECES。

NOTE: THIS INTERCONNECTION DIAGRAM IS THE LATEST AT THE TIME OF PRINTING AND SUBJECT TO CHANGE WITHOUT NOTICE 。

WAVEFORMS

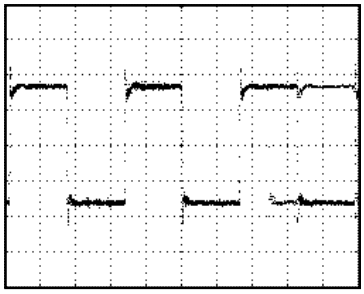
MPEG/MICON

10ns
1.0V



①

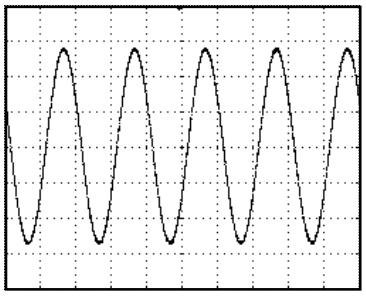
200ns
1.0V



②

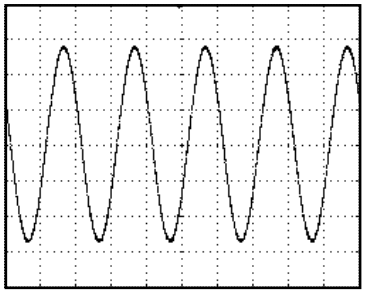
AUDIO/JACK

500µs
1.0V



⑥

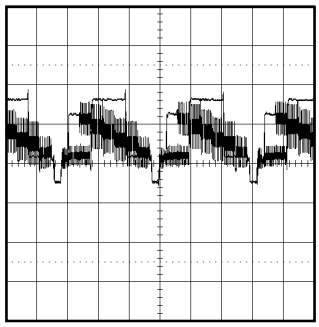
500µs
1.0VV



⑦

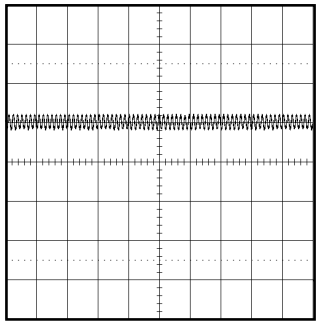
Y/C/AUDIO/HEAD AMP

20µs
1.0V



⑪

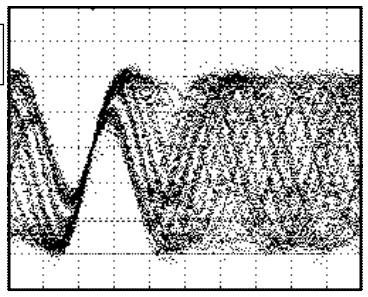
2µs
1.0V



⑫

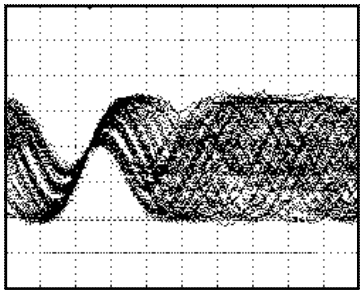
RF AMP/MOTOR DRIVE

100ns
200mV



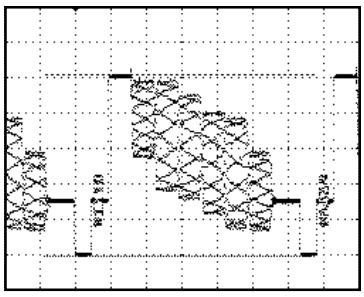
③

100ns
200mV



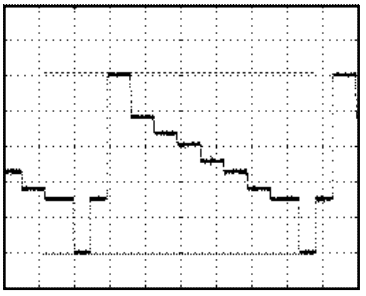
④

10µs
200mV



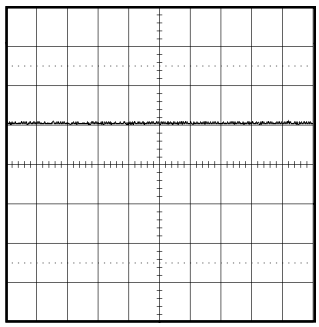
⑧

100µs
200mV



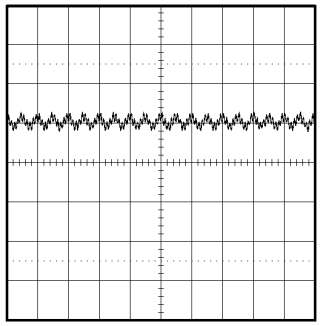
⑨

1ms
1.0V



⑬

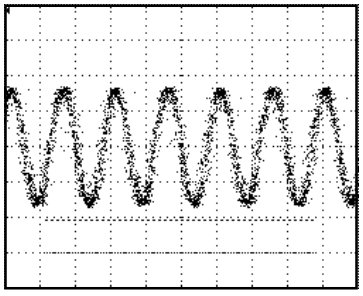
5ms
2.0V



⑭

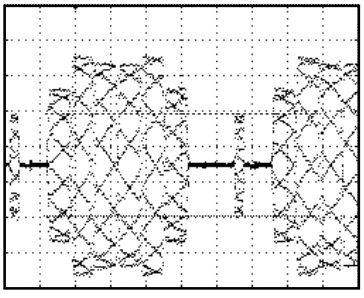
MEMORY

5ns
200mV



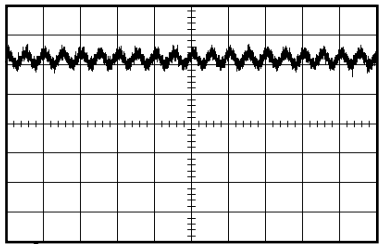
⑤

10µs
100mV



⑩

5ms
200m



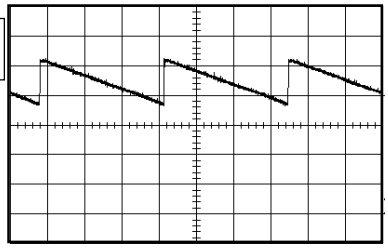
⑮

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

CHROMA/PROGRESSIVE/ PIN CUSHION

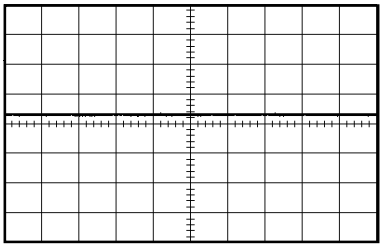
5ms
1.0V



16

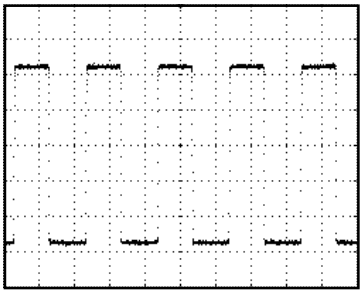
TV MICON

0.5ms
1.0V



22

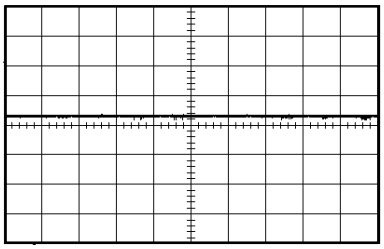
500ms
1.0V



27

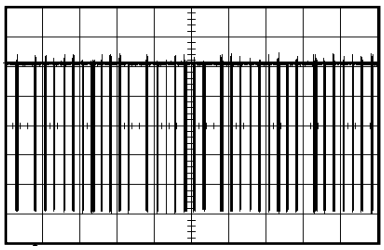
TV MICON

5ms
1.0V



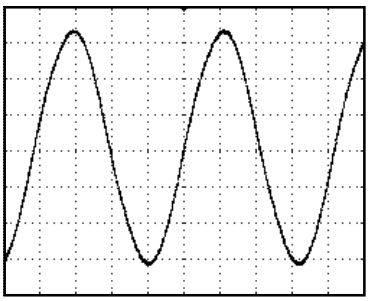
17

20ms
1.0V



23

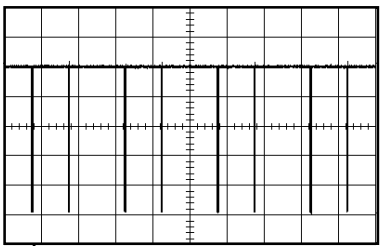
20ns
50mV



28

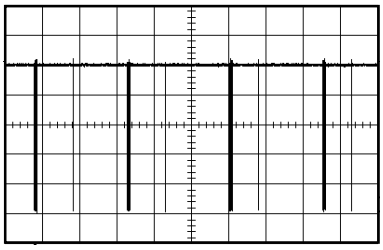
SYNC COUNT/ CONNECTOR

20ms
1.0V



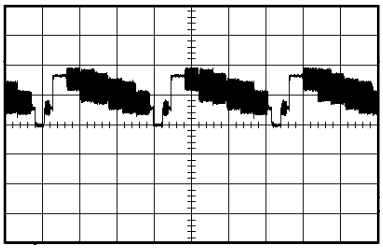
18

20ms
1.0V



24

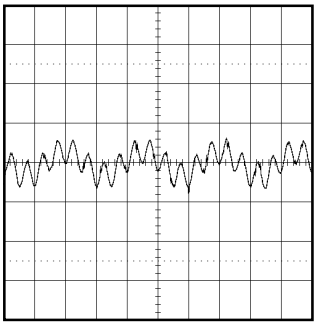
20µs
1.0V



29

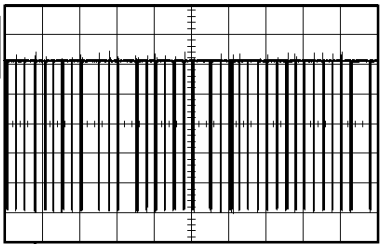
SOUND AMP/ SURROUND

1ms
2.0V



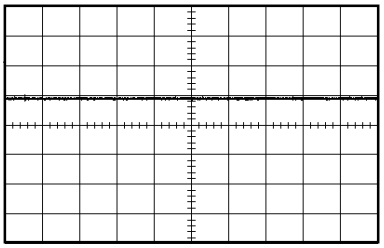
20

20ms
1.0V



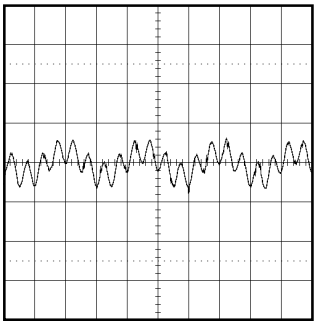
25

20µs
1.0V



30

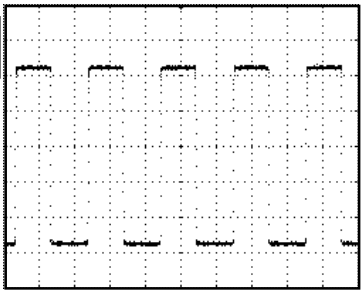
1ms
2.0V



21

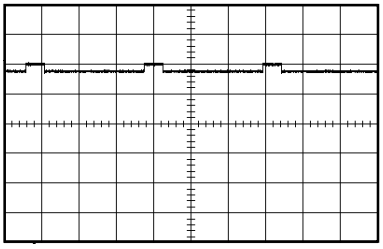
SYSCON/SERVO/TIMER

500ms
1.0V



26

20µs
1.0V



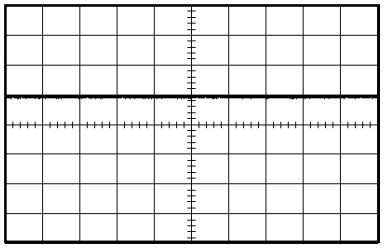
31

NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

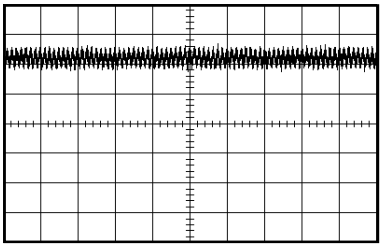
20µs
1.0V

32



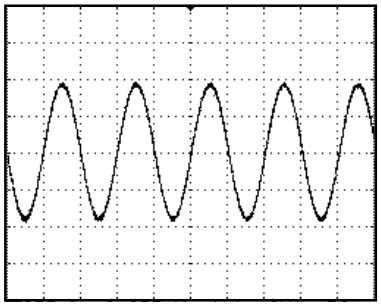
20ms
200mV

39



500µs
200mV

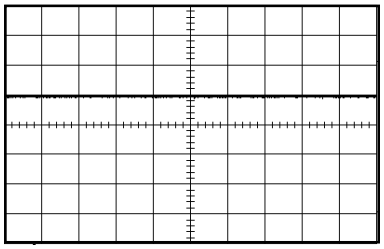
44



INTERFACE

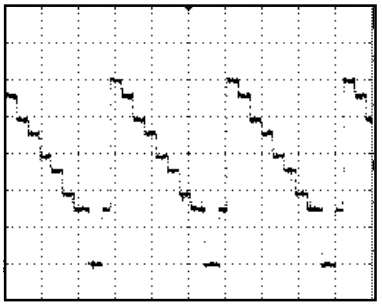
20µs
1.0V

33



10µs
200mV

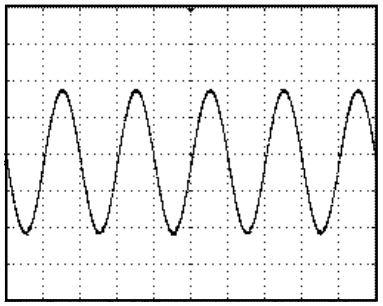
40



MICON2

500µs
1.0V

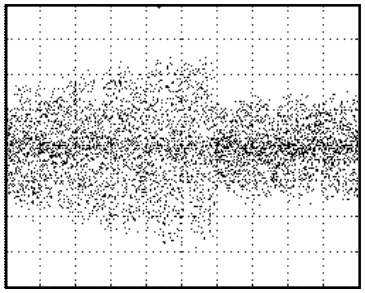
45



Hi-Fi

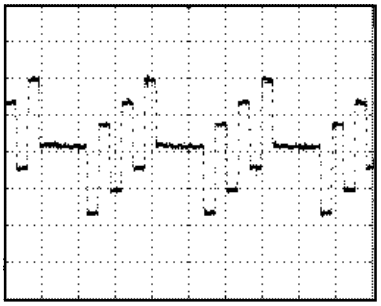
2ms
200mV

36



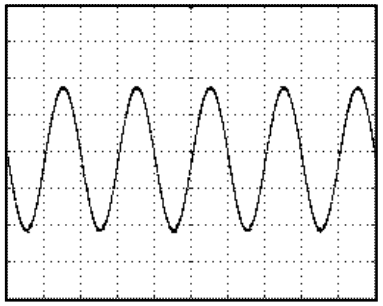
10µs
200mV

41



500µs
1.0V

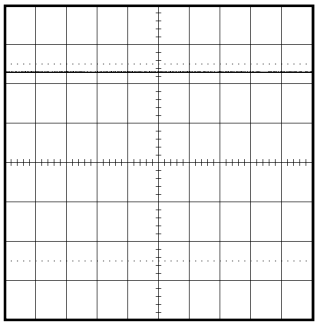
46



DIGITAL COMB

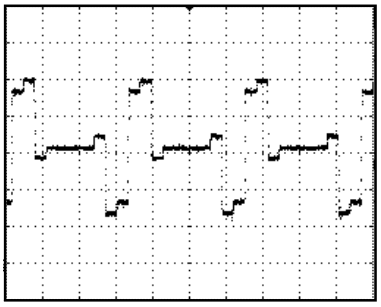
1ms
1.0V

37



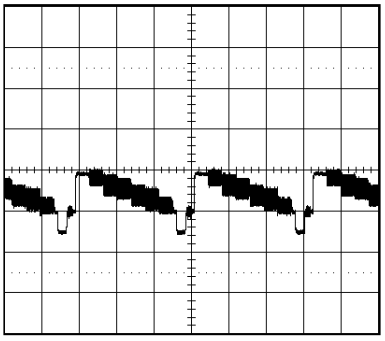
10µs
200mV

42



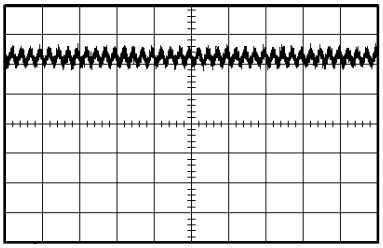
20µs
0.5V

47



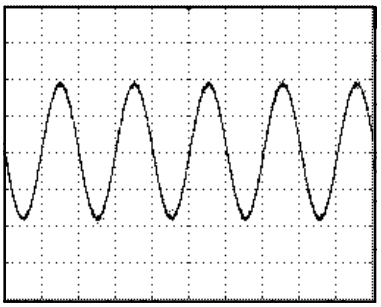
10ms
200mV

38



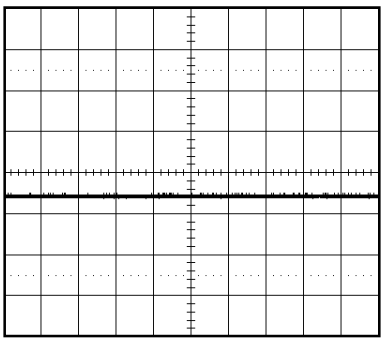
500µs
200mV

43



20µs
0.5V

48



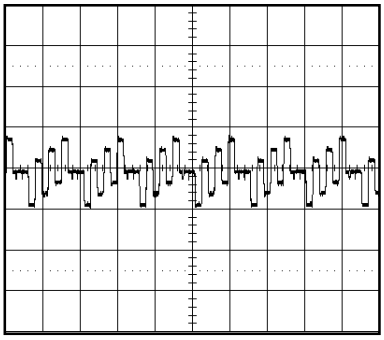
NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

SCALER

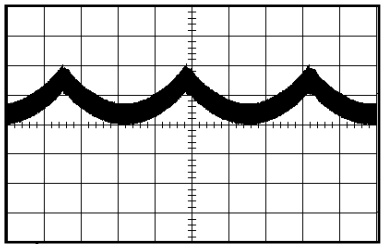
20µs
0.5V

49



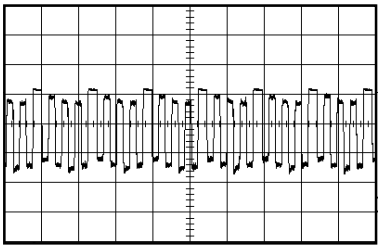
5ms
10V

54



20µs
50V

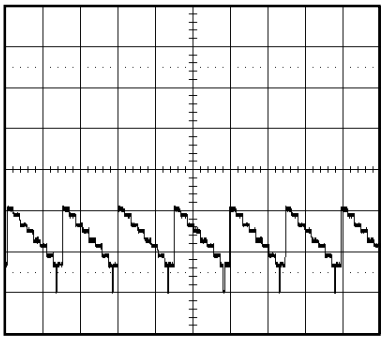
59



CRT/CVM

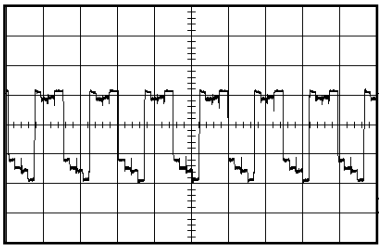
20µs
0.5V

50



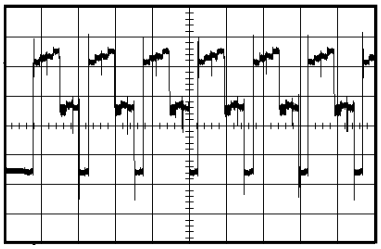
20µs
50V

55



20µs
1.0V

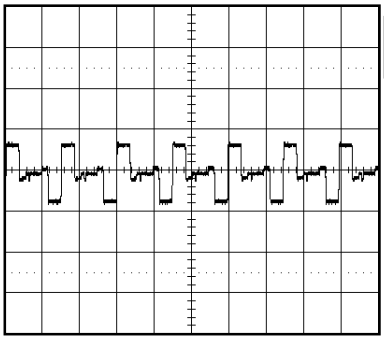
60



CHROMA/PROGRESSIVE/ PIN CUSHION

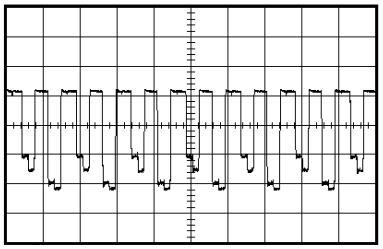
20µs
0.5V

51



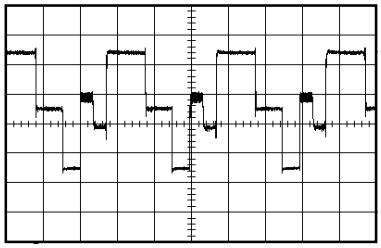
20µs
50V

56



10µs
1.0V

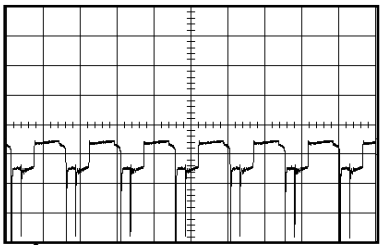
61



DEFLECTION

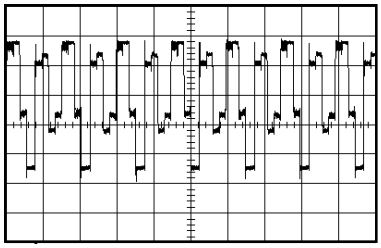
20µs
2.0V

52



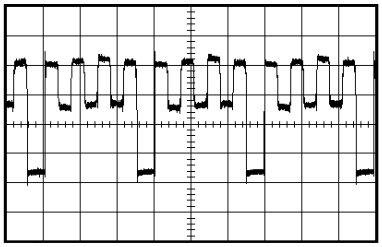
20µs
1.0V

57



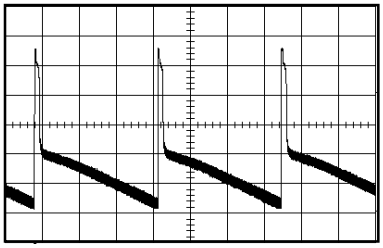
10µs
1.0V

62



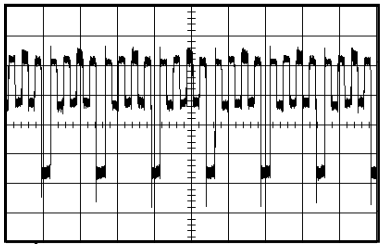
5ms
10V

53



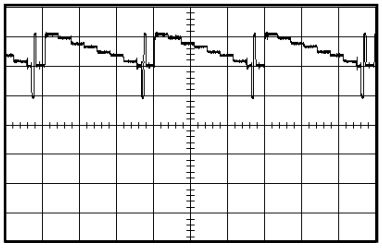
20µs
1.0V

58



10µs
0.5V

63

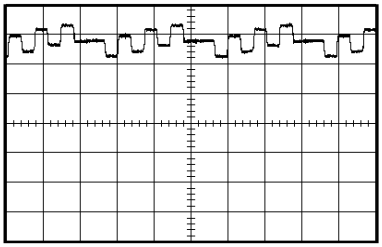


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

WAVEFORMS

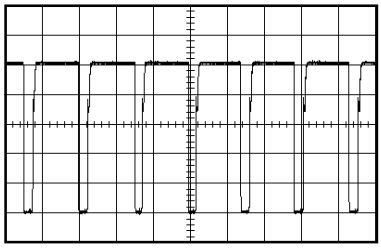
10µs
0.5V

64



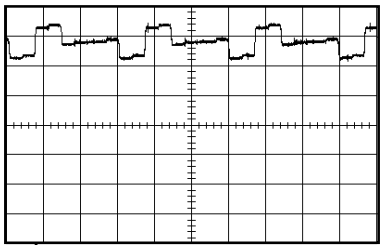
20µs
1.0V

69



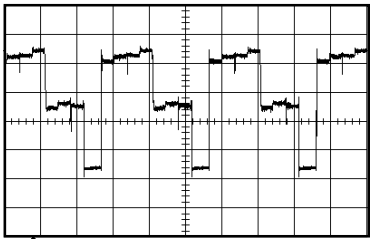
10µs
0.5V

65



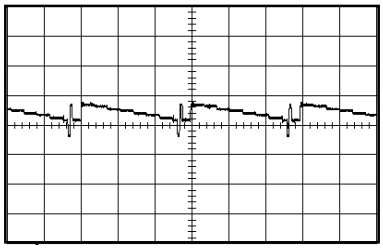
10µs
1.0V

70



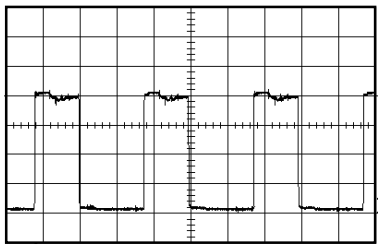
10µs
1.0V

66



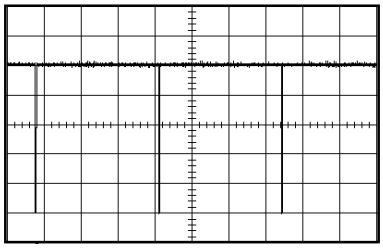
10µs
0.5V

67



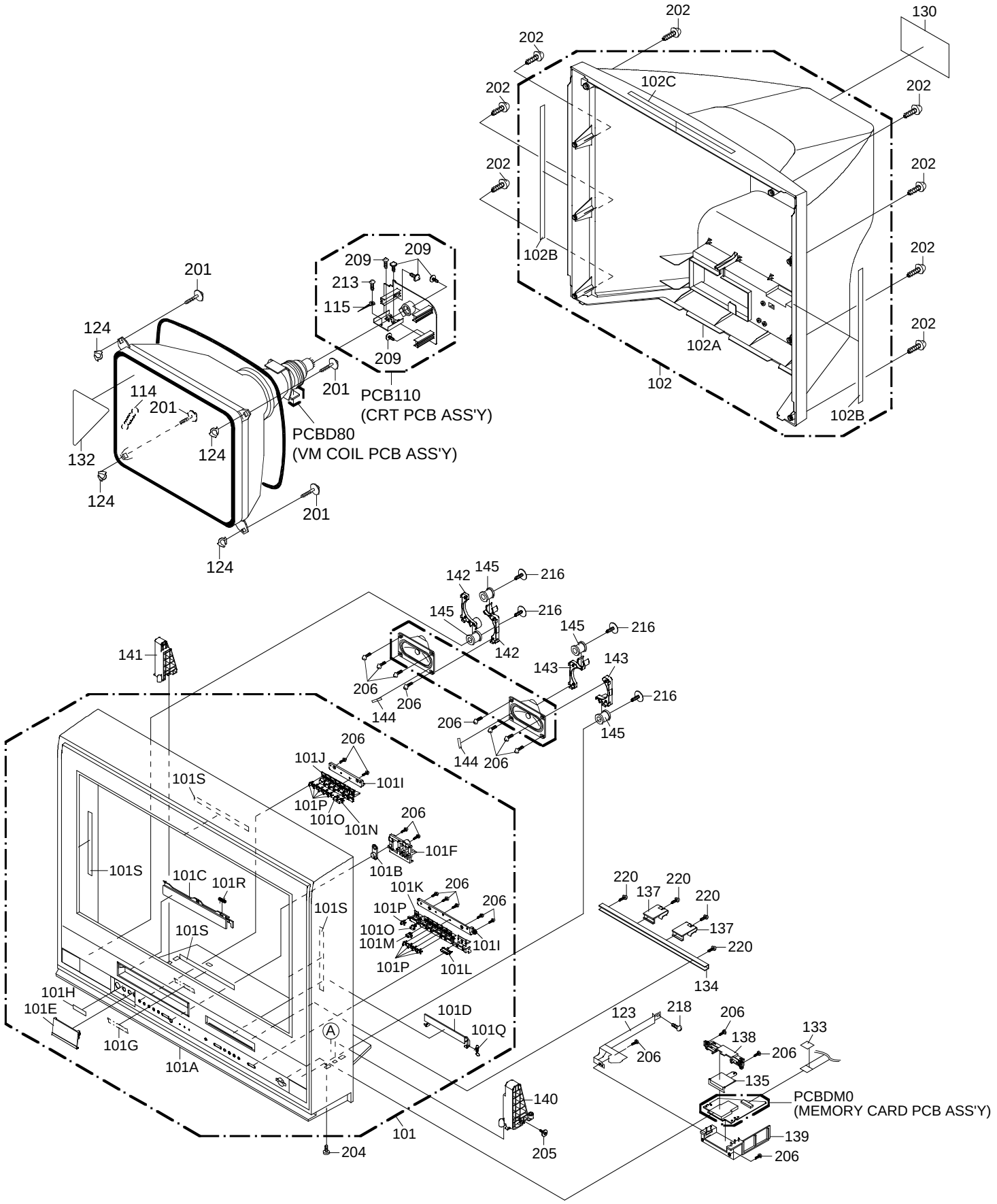
5ms
1.0V

68

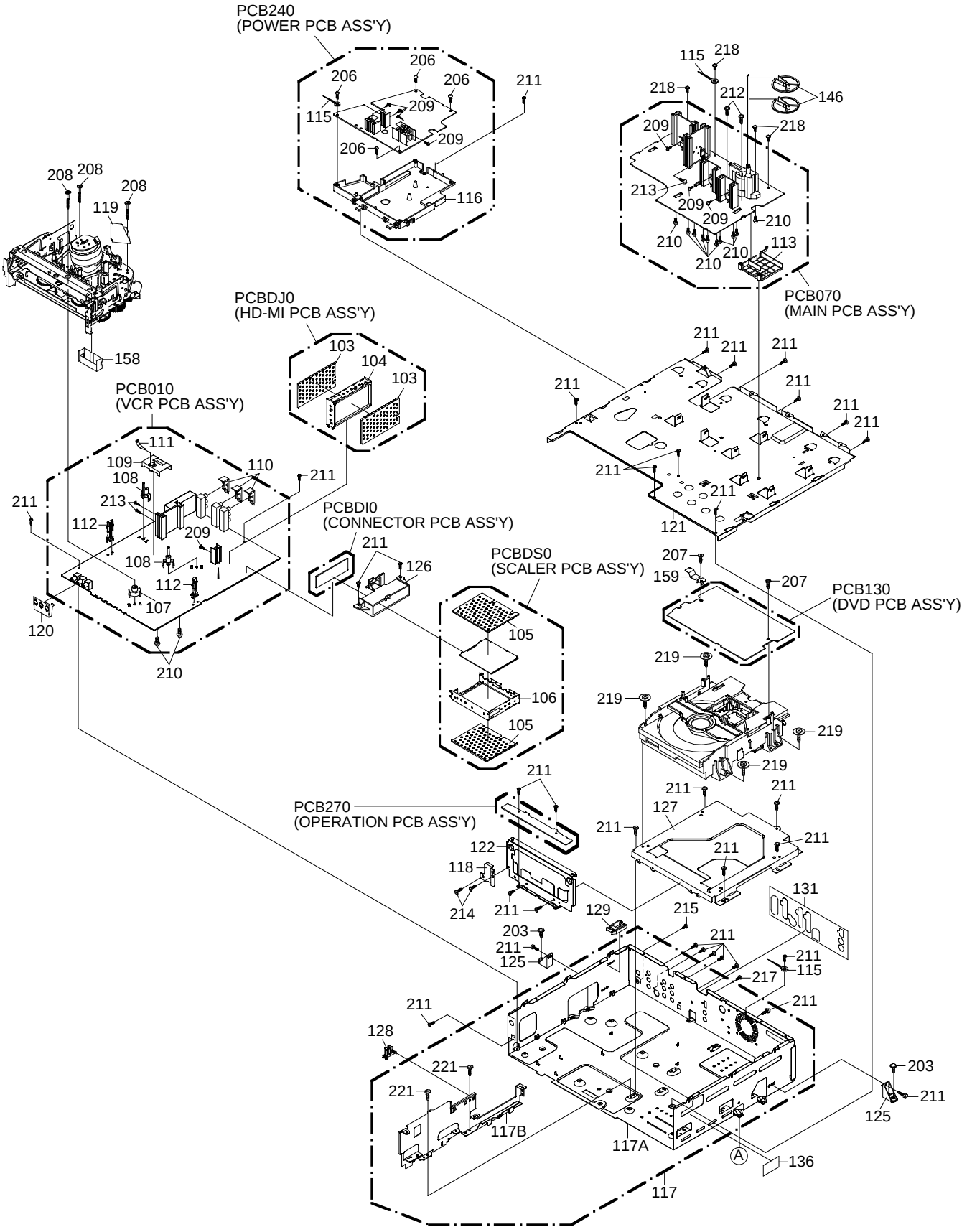


NOTE: The following waveforms were measured at the point of the corresponding balloon number in the schematic diagram.

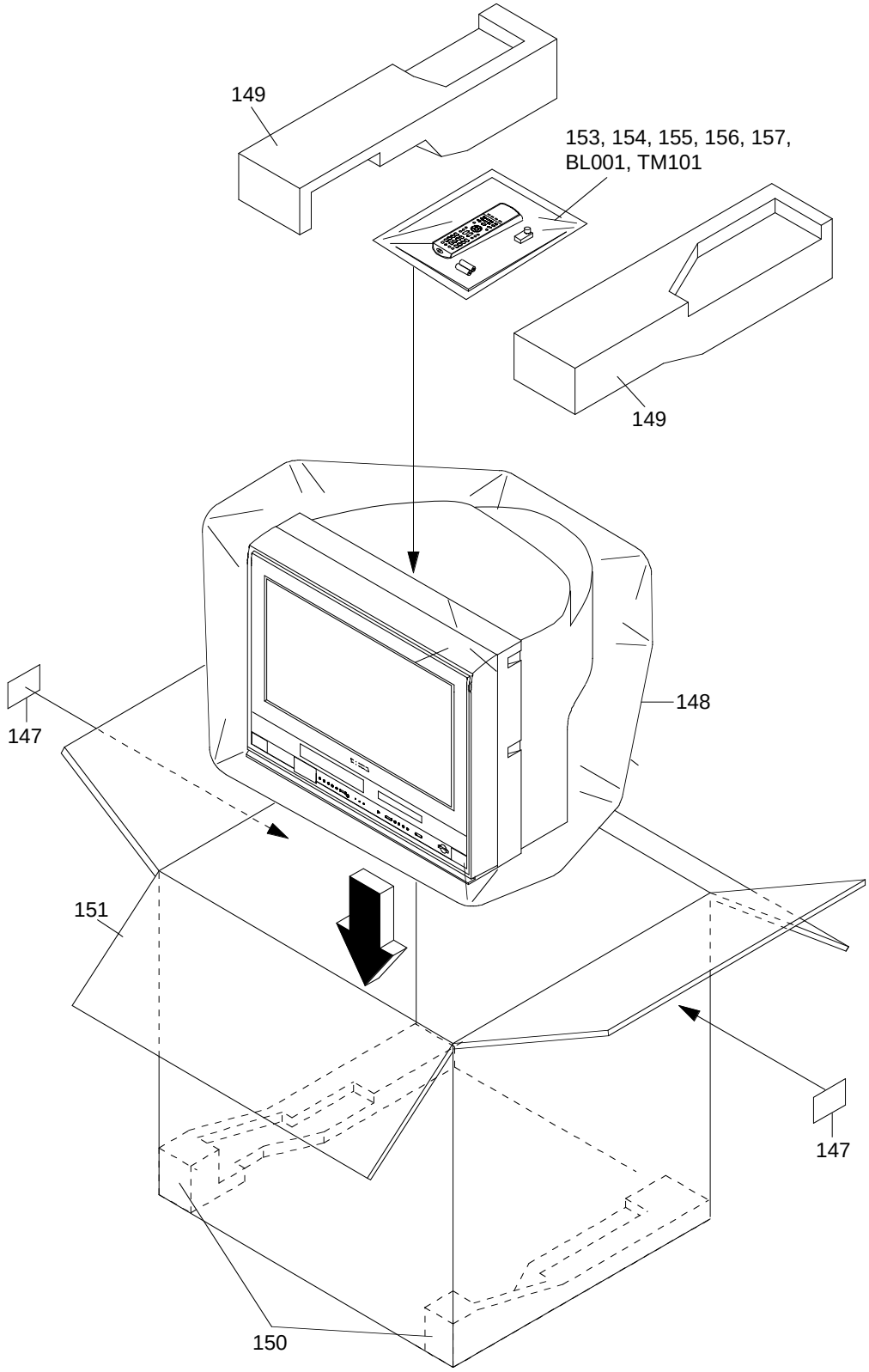
MECHANICAL EXPLODED VIEW



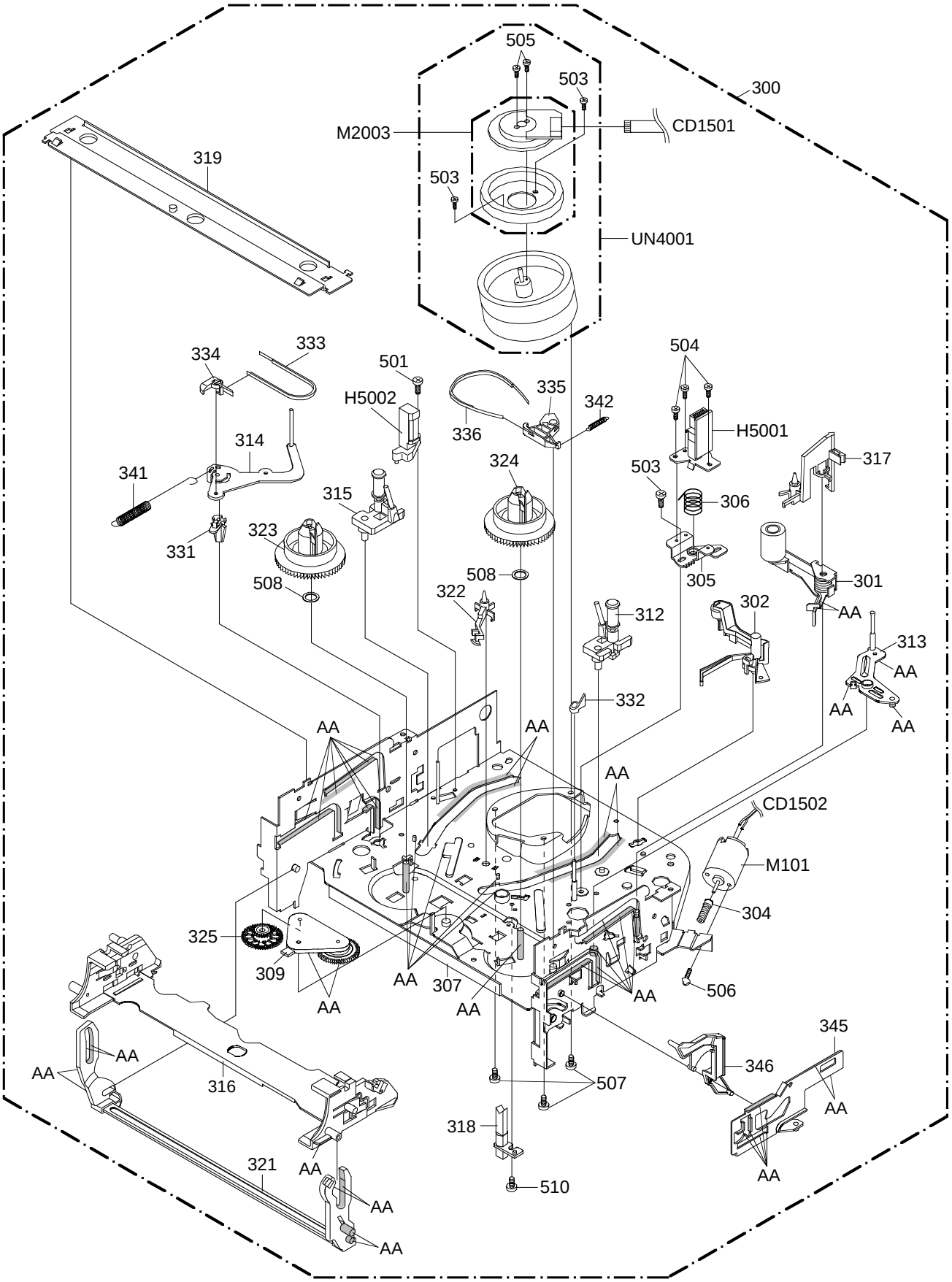
MECHANICAL EXPLODED VIEW



MECHANICAL EXPLODED VIEW
(PACKING DIAGRAM)



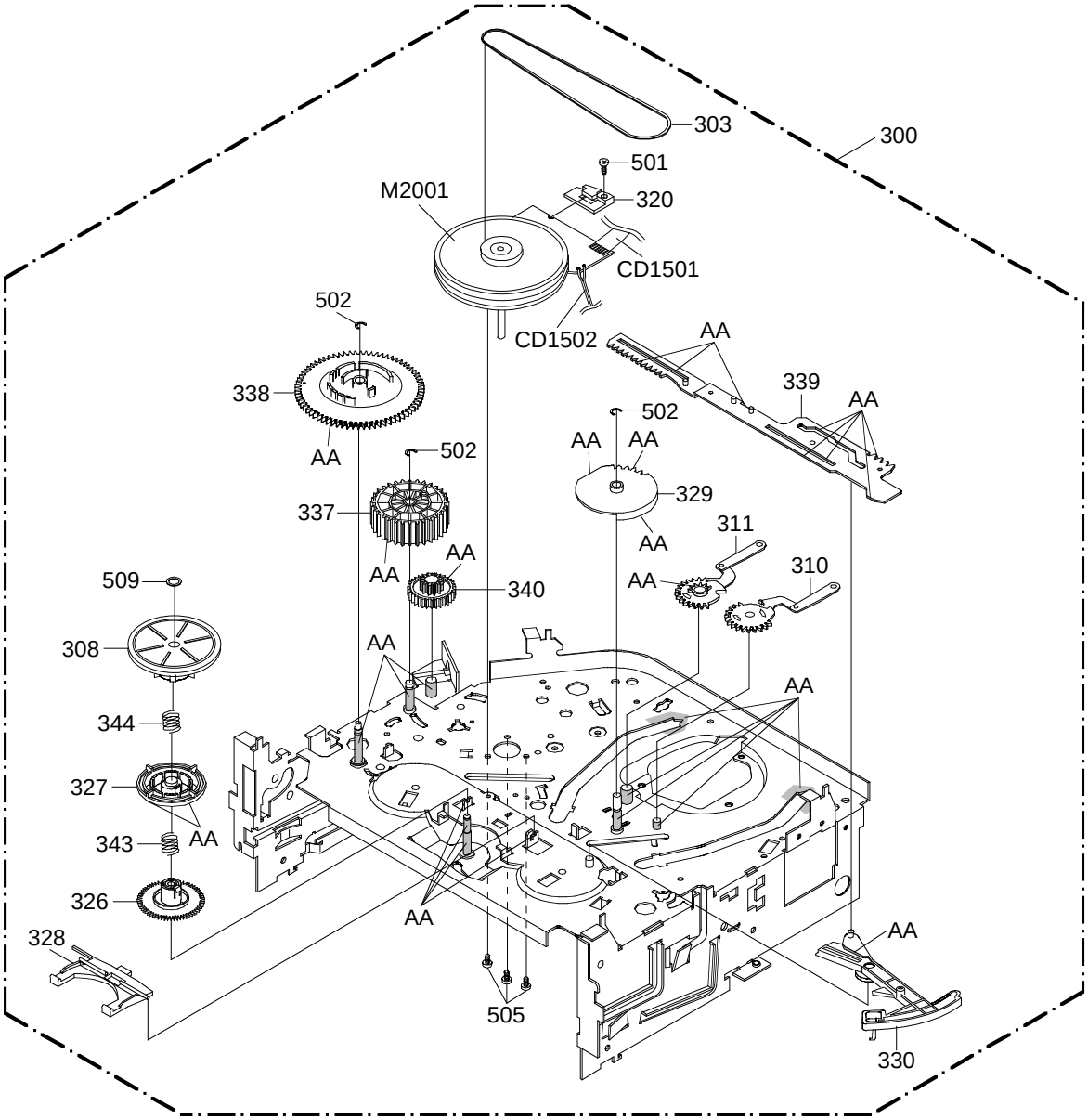
CHASSIS EXPLODED VIEW (TOP VIEW)



CLASS	MARK
GREASE	AA

NOTE: Applying positions AA for the grease are displayed for this section.
Check if the correct grease is applied for each position.

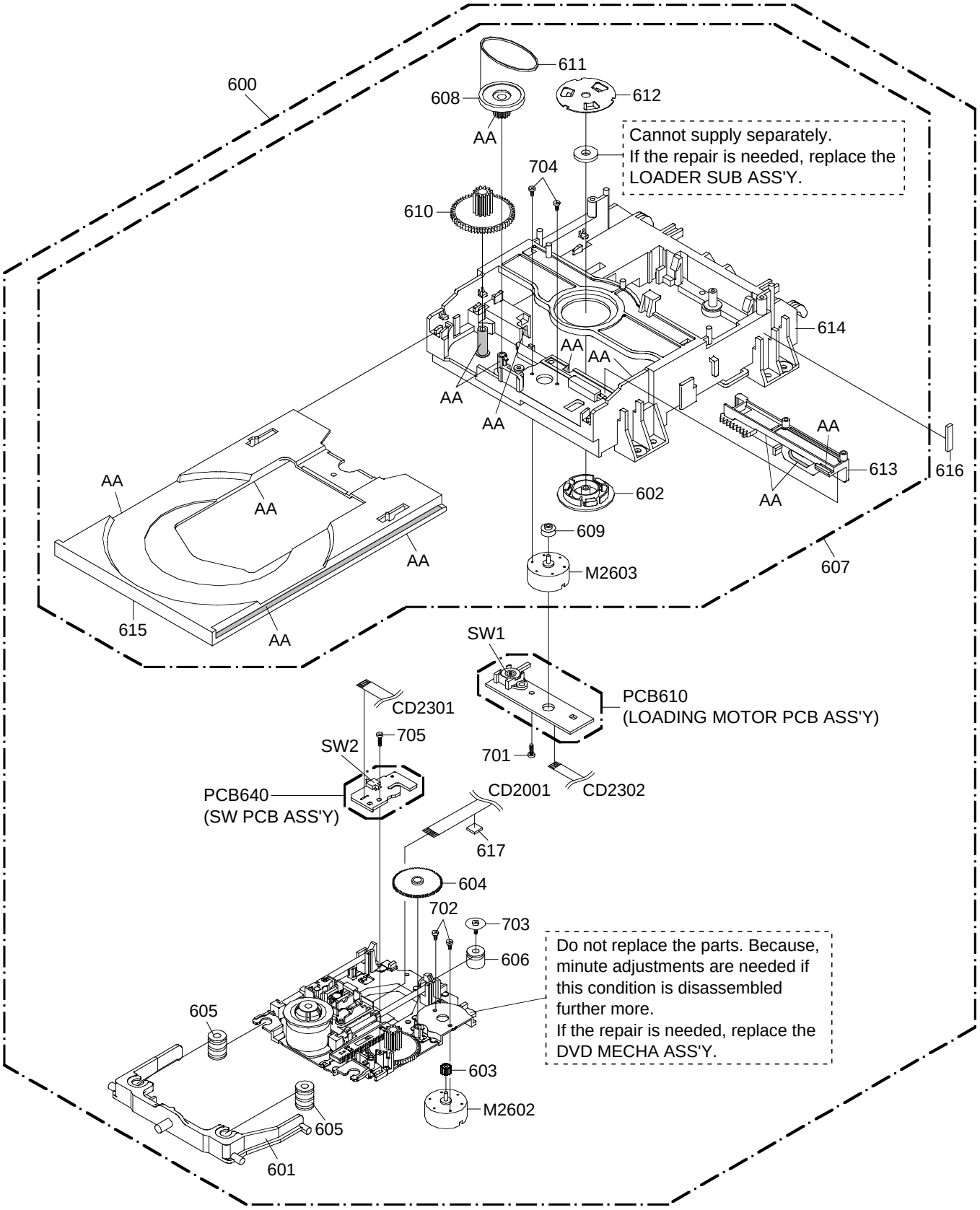
CHASSIS EXPLODED VIEW (BOTTOM VIEW)



CLASS	MARK
GREASE	AA

NOTE: Applying positions AA for the grease are displayed for this section. Check if the correct grease is applied for each position.

DVD DECK EXPLODED VIEW



CLASS	MARK
GREASE	AA

NOTE: Applying positions AA for the grease are displayed for this section.
Check if the correct grease is applied for each position.

MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description
101	AE007144	7A7010090A	FRONT CABI ASS'Y
101A	AE007145	701WPJ1328	CABINET,FRONT
101B	AE007146	711WPA0230	PLATE,FRONT
101C	AE007147	712WPJ0908	FLAT,FLAP
101D	AE007148	712WPJ0909	FLAP,DVD
101E	AE007149	712WPJ0931	DOOR
101F	AE007150	713WPA0359	GLASS,LED
101G	AD302321	7235490037	BADGE,BRAND
101H	AE007349	723549A050	AV LABEL
101I	AE003106	735WPA0805	STOPPER,BUTTON
101J	AE007152	735WPA0837	BUTTON,FRAME-VCR
101K	AE007153	735WPA0838	BUTTON,FRAME-DVD
101L	AE007154	735WPE0042	BUTTON,CAP 1
101M	AE007155	735WPE0043	BUTTON,CAP 2
101N	AE007156	735WPE0044	BUTTON,CAP 3
101O	AE007157	735WPE0045	BUTTON,CAP 4
101P	AE007158	735WPE0046	BUTTON,CAP 5
101Q	AE004308	742WKA0002	SPRING,DVD-FLAP
101R	AD301686	743WKA0037	SPRING,FLAP
101S	AE003110	800WQ0A052	FELT SHEET
102	AE007159	7A7020041A	BACK CABI ASS'Y
102A	AE007160	702WPA1170	CABINET,BACK
102B	AE006226	800WQ0A090	FELT SHEET
102C	AE006502	800WQ0A099	FELT SHEET
103	AE004831	752WSA0413	HDMI SHIELD,COVER
104	AE004832	752WSA0414	HDMI SHIELD,BOTTOM
105	AE005202	752WSA0429	HDMI SHIELD,COVER2
106	AE005203	752WSA0430	HDMI SHIELD,BOTTOM2
107	BZ710577	701WPA0686	HOLDER,DECK
108	BZ710658	701WPA0751	HOLDER,DECK
109	BZ710466	752WSA0230	SHIELD,CASE HEAD AMP
110	BZ710659	752WSA0290	SHIELD,COMPO
111	BZ710331	753WUAA006	SPRING,EARTH HEAD AMP
112	BZ710498	85OP700038	HOLDER,END SENSOR
113	AE007350	761WPA0387	HOLDER,FBT
114	BZ710660	741WUA0021	SPRING,EARTH
115	AD301370	899EFBA002	WIRING-CLIP
116	AE007161	761WPA0386	POWER,PCB COVER
117	AE007162	7G7520005A	PLATE,BOTTOM ASS'Y
118	AE005974	752WSAA102	HOLDER,VCR
119	BZ710633	752WSA0275	COVER,AC HEAD
120	BZ710671	752WSA0292	SHIELD,AV JACK
121	AE007163	752WSA0483	SHIELD,TOP
122	AE005976	753WSAA018	SHIELD,FRONT
123	AE007351	752WSA0509	SHIELD,CARD 3
124	AE006374	769WSAA008	WASHER,CRT T=0.5
125	AE007164	761WPA0388	HOLDER,BOTTOM
126	AE007165	761WPA0389	HOLDER,MODULE
127	AE004907	761WSAA023	ANGLE,DECK
128	BZ710694	774WPA0002	HOLDER,WIRE
129	AE000164	774WPA0005	HOLDER,WIRE-2
130	AE007166	7225490188	SHEET,RATING
131	AE007167	7230007905	SHEET,JACK
132	AE007168	7230007938	POP LABEL
133	AE007169	724WNA0013	SHEET,PC
134	AE005981	752WSAA083	ANGLE,FRONT
135	AE006504	752WSA0490	SHIELD,CARD
136	AE007170	753WEA0019	SHEET,CU
137	AE004839	761WPA0294	COIL HOLDER
138	AE006509	761WPA0371	HOLDER,CARD 1
139	AE006510	761WPA0372	HOLDER,CARD 2

MECHANICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
140	AE007171	761WPA0379	HOLDER,CRT R	
141	AE007172	761WPA0380	HOLDER,CRT L	
142	AE007173	761WPA0390	HOLDER,SPEAKER L	
143	AE007174	761WPA0391	HOLDER,SPEAKER R	
144	BZ710149	800WFAA008	CUSHION C	
145	AD300518	801WR00001	DAMPER,SPEAKER	
146	BZ710260	899HV3T000	HOLDER,ANODE WIRE	
147	AE007175	7230007906	SHEET,BAR CODE	
148	AE000636	791WHA0102	LAMIFILM,BAG	
149	AE007176	792WHA0591	PACKAGE,TOP	
150	AE007177	792WHA0592	PACKAGE,BOTTOM	
151	AE007178	793WCD1622	GIFT BOX	
152	AE007179	A5U3010975	INSTRUCTION BOOK KIT	
153	AE005985	JB5KD400	POLYBAG,INSTRUCTION(RED CAUTION)	
154	AE004983	J2D60117A	REGISTRATION CARD	
155	AE004982	J2D60129A	INFORMATION SHEET	
156	AE004980	J2D60143A	NETFLIX CARD	
157	AE007180	J5U30101A	INSTRUCTION BOOK	
158	AD301966	752WSA0327	SHIELD,COVER FPC	
159	AE007352	752WSA0514	SHIELD,EARTH	
201	AE004848	8141H60D5U	SCREW,TAP TITE(P) GW20	6x45
202	AE003522	8117540B0U	SCREW,TAP TITE(B0) TRUSS	4x20
203	AE004847	8117540A6U	SCREW,TAP TITE(B0) TRUSS	4x16
204	AE007353	8117540A2U	SCREW,TAPPING(B0) TRUSS	4x12
205	AE003527	8110E3080U	SCREW,TAP TITE(P) WH10	3x8
206	AE003529	811063080U	SCREW,TAP TITE(P) BRAZIER	3x8
207	AE003530	811022680U	SCREW,TAP TITE(P) BIND	2.6x8
208	AE005536	8109130B9U	SCREW,TAP TITE(B) R PAN	3x29
209	AE003524	8109I30A0U	SCREW,TAP TITE(B) WH7	3x10
210	AE005917	810963080Q	SCREW,TAP TITE(B) BRAZIER	3x8
211	AE003526	810923080U	SCREW,TAP TITE(B) BIND	3x8
212	AE005989	8107630A8U	SCREW,TAP TITE(S) BRAZIER	3x18
213	AE003531	810763080U	SCREW,TAP TITE(S) BRAZIER	3x8
214	AE005987	810723060U	SCREW,TAP TITE(S) BIND	3x6
215	AE003532	810723040U	SCREW,TAP TITE(S) BIND	3x4
216	AE005398	8162540A6U	SCREW,TAPPING (BO) WASHER 18	
217	AE005214	810213080U	SCREW,PAN	M3x8
218	AE005988	810793060U	SCREW,CUP(S)	3x6
219	AE005541	810F13080U	SEMS(F)	3x8
220	AE003528	8110630A0U	SCREW,TAP TITE(P) BRAZIER	3x10

CHASSIS REPLACEMENT PARTS LIST

	Location No.	TSB P/N	Reference No.	Description	
	300	AE006791	A5U1010420A	DECK ASSY	A5U1010420A
	301	AE005514	85OA400245	PINCH ROLLER BLOCK VA2	
	302	BZ710682	85OA500026	AHC ASS'Y	
	303	BZ710193	85OP200290	BELT,CAPSTAN (S)	
	304	BZ710515	85OP600581	WORM	
	305	AE005919	85OP500091	BASE,AC HEAD	
	306	BZ710112	85OP800324	SPRING,AC HEAD	
	307	AE005835	85OA000528	MAIN CHASSIS ASS'Y	
	308	BZ710517	85OA200089	CLUTCH ASS'Y	
	309	AE005920	85OA200092	ARM IDLER ASS'Y	
	310	AE005836	85OA300068	LOADING ARM S UNIT	
	311	AE005837	85OA300070	LOADING ARM T UNIT	
	312	BZ710521	85OA400223	INCLINED BASE T UINT 3S	
	313	AE005838	85OA400249	P5 ARM ASS'Y 2	
	314	AE005839	85OA400248	TENSION ARM ASS'Y 2	
	315	BZ710524	85OA400231	INCLINED BASE S UNIT	
	316	AE005840	85OA900234	CASS HOLDER ASS'Y	
	317	BZ710552	85OP900745	CASS,OPENER	
	318	BZ710106	85OP700035	REFLECTOR,LED	
	319	AE005841	85OP900755	BRACKET,TOP 3V	
	320	AE004275	85OP400549	HOLDER,CAPSTAN	
	321	AE005842	85OA900233	LINK UNIT	
	322	BZ710531	85OP000496	POST,CASS GUIDE	
	323	BZ710532	85OP200316	REEL,S (S)	
	324	BZ710533	85OP200317	REEL,T (S)	
	325	BZ710534	85OP200308	GEAR,IDLER	
	326	BZ710535	85OP200311	GEAR,CLUTCH	
	327	BZ710536	85OP200312	GEAR,COUPLING	
	328	BZ710537	85OP200313	LEVER,CLUTCH	
	329	BZ710538	85OP300194	GEAR,MAIN LOADING	
	330	BZ710092	85OP400490	LEVER,TENSION	
	331	BZ710093	85OP400492	HOLDER,TENSION	
	332	BZ710366	85OP400520	CAP.P4	
	333	BZ710762	85OP400542	BAND,TENSION	
	334	BZ710540	85OP400533	CONNECT,TENSION	
	335	BZ710541	85OP600573	ARM,BRAKE T	
	336	BZ710763	85OP600584	BAND,BRAKE T	
	337	BZ710543	85OP600577	CAM,PINCH ROLLER	
	338	BZ710544	85OP600578	CAM,MAIN	
	339	AE005843	85OP600585	ROD,MAIN	
	340	BZ710546	85OP600582	GEAR,JOINT	
	341	BZ710110	85OP800322	SPRING,TENSION	
	342	BZ710547	85OP800360	SPRING,BRAKE T	
	343	BZ710548	85OP800355	SPRING,COUPLING	
	344	BZ710549	85OP800356	SPRING,RING	
	345	AE005844	85OP900754	LEVER,LINK	
	346	BZ710551	85OP900744	LEVER,FLAP	
	501	AE005845	810722680U	SCREW,TAP TITE(S) BIND	M2.6x8
	502	AE005846	83ETW3000U	E-RING	3.0
	503	AE005847	810722640U	SCREW,TAP TITE(S) BIND	M2.6x4
	504	AE005848	810212060U	SCREW,PAN	M2x6
	505	AE005849	810912660U	SCREW,TAP TITE(B) PAN	M2.6x6
	506	AE005850	810A13040U	SCREW/WASHER(A)	M3x4
	507	AE005851	810A12650U	SCREW/WASHER(A)	M2.6x5
	508	BZ710056	82Q264713N	POLYSLIDER WASHER	2.6x4.7xT0.13
	509	BZ710054	82P184505N	POLYSLIDER WASHER(CUT)	1.8x4.5xT0.5
	510	AE005540	810722660U	SCREW,TAP TITE(S) BIND	2.6x6
	CD1501	BZ614292	122H071704	CORD JUMPER	2H071704
	CD1502	AD301953	122Y021002	CORD JUMPER	2Y021002
	H5001	AD301675	1523Q91003	HEAD (AUDIO CONTROL)	VTR-1X2RPE22-756
	H5002	AD301676	1543Q02014	HEAD (FULL ERASE)	VTR-1X2ERS11-154
⚠	M101	AE005552	1596S98002	MOTOR,LOADING	MDB2B66B
⚠	M2001	AE005853	1510S98044	CAPSTAN DD UNIT	F2QVB73B
	M2003	AE006792	1589S11025	MICRO MOTOR	I20AL34K
⚠	UN4001	AE006793	A5U1010500	CYLINDER UNIT ASS'Y	A5U1010500

DVD DECK REPLACEMENT PARTS LIST

	Location No.	TSB P/N	Reference No.	Description	
⚠	600	AE006521	A2F401H650	DVD MECHA ASS'Y	A2F401H650
	601	AE005003	92P100109A	HOLDER,TRAVERSE	
	602	AE003550	92P100094A	CLAMPER	
	603	AE003551	92P100088A	GEAR,MOTOR	
	604	AE005414	92P100108A	GEAR,MIDDLE	
	605	AE003538	92P200013A	INSULATOR(F)	
	606	AE003539	92P200014A	INSULATOR(R)	
	607	AE006115	92SBB0029A	LOADER SUB ASS'Y	
	608	AE003541	92P100095A	GEAR,PULLEY	
	609	AE003542	92P100097A	PULLEY,MOTOR	
	610	AE003549	92P100096A	GEAR,MAIN	
	611	AE003544	92P200012A	BELT,LOADING	
	612	AE003545	92P000014A	PLATE,CLAMPER	
	613	AE003546	92P100093A	RACK,LOADING	
	614	AE003547	92P100091A	FRAME,MAIN	
	615	AE003548	92P100092A	TRAY	
	616	BZ710149	800WFAA008	CUSHION C	
	701	AE003530	811022680U	SCREW,TAP TITE(P) BIND	2.6x8
	702	AE003554	814011723U	SCREW,PAN	M1.7x2.3 P3
	703	AE003555	816112080U	SEMS.TAP TITE(P) PAN W10	2x8
	704	AE003556	814011730U	SCREW,PAN	M1.7x3 P3
	705	AE003557	811022080U	SCREW,TAP TITE(P) BIND	2x8
	CD2001	AD301855	122H0O1901	CORD JUMPER	2H0O1901
	CD2301	AE003558	122H062102	CORD JUMPER	2H062102
	CD2302	AE003559	122H052601	CORD JUMPER	2H052601
⚠	M2602	AE005930	1515S98003	FEED MOTOR	BCZ3B03B
⚠	M2603	AE005931	1596S18003	MOTOR,LOADING	BCZ3B52B
	PCB610	AE005932	A5R801V610	PCB ASS'Y	DED003A
	PCB640	AE006740	A2F401H640	PCB ASS'Y	DED012B
	SW1	AE003564	0515S32002	SWITCH	SSS-13-2
	SW2	AE003565	0500101037	PUSH SWITCH	ESE22MH24

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		RESISTORS		
⚠R401	AE002516	R4X5T6222F	R,METAL	2.2K OHM 1/6W
⚠R403	BZ210105	R4X5T6183F	R,METAL	18K OHM 1/6W
⚠R405	BZ210231	R4X5T6153F	R,METAL	15K OHM 1/6W
⚠R406	AD300039	R3X18A680J	R,METAL OXIDE	68 OHM 2W
⚠R408	BZ210063	R3X181R22J	R,METAL OXIDE	0.22 OHM 1W
⚠R413	AD300600	R655812R2J	R,FUSE	2.2 OHM 1W
⚠R416	AD300600	R655812R2J	R,FUSE	2.2 OHM 1W
⚠R417	AD302132	R3X18A271J	R,METAL OXIDE	270 OHM 2W
⚠R429	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
⚠R430	AE007136	R5X2AF1R8J	R,CEMENT	1.8 OHM 10W
⚠R434	BZ210053	R002T22R2J	RC	2.2 OHM 1/2W
⚠R438	AE005419	R3X181272J	R,METAL OXIDE	2.7K OHM 1W
⚠R445	AD301311	R655813R3J	R,FUSE	3.3 OHM 1W
⚠R459	AD301345	R002T22R7J	RC	2.7 OHM 1/2W
R460	AE004808	R0G3K2221K	RC	220 OHM 1/2W
R462	BZ210211	R3X28B221J	R,METAL OXIDE	220 OHM 3W
⚠R468	BZ210003	R3K181102J	R,METAL OXIDE	1K OHM 1W
⚠R483	AE000147	R3X181220J	R,METAL OXIDE	22 OHM 1W
⚠R492	AE002520	R3X181100J	R,METAL OXIDE	10 OHM 1W
⚠R801	BZ210154	R5X2CE332J	R,CEMENT	3.3K OHM 7W
⚠R834	BZ210154	R5X2CE332J	R,CEMENT	3.3K OHM 7W
⚠R841	BZ210154	R5X2CE332J	R,CEMENT	3.3K OHM 7W
⚠R855	BZ210185	R65582151J	R,FUSE	150 OHM 1/2W
⚠R881	AD302132	R3X18A271J	R,METAL OXIDE	270 OHM 2W
⚠R1703	BZ210206	R002T2155J	RC	1.5M OHM 1/2W
⚠R1704	BZ210251	R3X181R47J	R,METAL OXIDE	0.47 OHM 1W
⚠R1708	BZ210080	R0G3K2275K	RC	2.7M OHM 1/2W
⚠R1712	BZ210078	R65584101J	R,FUSE	100 OHM 1/4W
⚠R1714	AE001883	R3X28A104J	R,METAL OXIDE	100K OHM 2W
⚠R1715	BZ210149	R3X18AR68J	R,METAL OXIDE	0.68 OHM 2W
⚠R1716	AE005735	R63881R22J	R,FUSE	0.22 OHM 1W
⚠R3003	AD300040	R3X18A2R2J	R,METAL OXIDE	2.2 OHM 2W
⚠R6401	BZ210233	R4X5T6272F	R,MET	2.7K OHM 1/6W
⚠R6405	AD301203	R002T4101J	RC	100 OHM 1/4W
⚠R6411	AD301143	R3X181R27J	R,METAL OXIDE	0.27 OHM 1W
⚠R6412	AD301143	R3X181R27J	R,METAL OXIDE	0.27 OHM 1W
⚠R6415	AE004810	R5X2CF010J	R,CEMENT	1J 1 OHM 10W
⚠R6418	AE001073	R3X18A331J	R,METAL OXIDE	330 OHM 2W
⚠R6426	BZ210051	R3X18AR47J	R,METAL OXIDE	0.47 OHM 2W
		CAPACITORS		
C170	BZ110255	CQGTB0415K	CC	0.1 UF 50V B
C321	BZ110209	E0ELF3222M	CE	2200 UF 25V
⚠C403	BZ110195	E02LU8220M	CE	22 UF 100V
⚠C404	AE004798	E61DFB470M	CE	47 UF 160V
C412	AE004366	P4J7F3304J	CMPP	0.3 UF 250V PMS
C417	AE000606	P3N1F5103J	CPP	0.01 UF 630V
⚠C418	AE004807	P4N8FK852H	CMPP	0.0085UF 1.5KV
C425	AE004367	P4J7F3335J	CMPP	3.3 UF 250V PMS
C426	BZ110204	E0ELFD220M	CE	22 UF 250V
⚠C429	AE001766	E02LT4331M	CE	330 UF 35V
⚠C430	BZ110101	E5EZF3222M	CE	2200 UF 25V
C433	BZ110239	C03L0R7L2K	CC	330 PF 2KV R
⚠C434	BZ110124	E5EZF4222M	CE	2200 UF 35V
C435	AE003039	P4N8FK682H	CMPP	0.0068UF 1.5KV
C436	BZ110202	C0PLRR713K	CC	0.001 UF 2KV R
C438	AE004933	P4J7F3333J	CMPP	0.033 UF 250V PMS
C445	AE000606	P3N1F5103J	CPP	0.01 UF 630V
⚠C446	BZ110225	E5EZFD220M	CE	22 UF 250V
C808	AE003828	C13DB0713K	CC	0.001 UF 2KV B
C809	AD301347	E0ELFD330M	CE	33 UF 250V
C1702	BZ110183	C03L0R7W2K	CC	820 PF 2KV R
⚠C1704	BZ110025	P2122B224M	CMP	0.22 UF 275V ECQUL
⚠C1707	BZ110035	P2122B104M	CMP	0.1 UF 275V ECQUL
⚠C1709	AD301635	E51CGC331M	CE	330 UF 200V
⚠C1711	BZ110202	C0PLRR713K	CC	0.001 UF 2KV R
C1712	AE002229	P411F4393J	CMPP	0.039 UF 400V ECWF
C1718	BZ110129	E5EZF2222M	CE	2200 UF 16V
C1719	AE004691	E61FF0222D	CE	2200 UF 6.3V
⚠C1720	AD301026	CD39E0M13M	CC	0.001 UF 250V
C1721	AE000074	E02L08101M	CE	100 UF 100V
C1722	AE005174	E61FF1222D	CE	2200 UF 10V

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		CAPACITORS		
C6405	BZ110203	C0PLRR7W2K	CC	820 PF 2KV RR
⚠C6406	BZ110009	C13HB07H3K	CC	0.0022UF 2KV B
⚠C6407	BZ110009	C13HB07H3K	CC	0.0022UF 2KV B
⚠C6411	AE003883	E51DFC102M	CE	1000 UF 200V
⚠C6415	BZ110222	CD39E0MH3M	CC	0.0022UF 250V
⚠C6416	AE000950	CD39E0ME3M	CC	0.0015UF 250V
C6421	AE007134	C0300R7H3K	CC	0.0022UF 2KV R
⚠C6422	BZ110224	E5EZF3332M	CE	3300 UF 25V
⚠C6423	AE004799	E61SFC221M	CE	220 UF 200V
⚠C6428	BZ110055	E5EZF4102M	CE	1000 UF 35V
		DIODES		
D001	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D101	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D102	BZ410073	D28TEQS040	DIODE,SCHOTTKY	11EQS04TA1B2
D103	BZ410064	D97U03R91B	DIODE,ZENER	MTZJ3.9B T-77
D104	BZ410073	D28TEQS040	DIODE,SCHOTTKY	11EQS04TA1B2
D106	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D107	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D109	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D111	BZ410012	D28TQS04N0	DIODE,SCHOTTKY	11EQS04N-TA1B2
D112	BZ410073	D28TEQS040	DIODE,SCHOTTKY	11EQS04TA1B2
D113	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D114	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D115	BZ410073	D28TEQS040	DIODE,SCHOTTKY	11EQS04TA1B2
D170	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D350	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D351	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D402	BZ410063	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
⚠D403	BZ410043	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠D404	BZ410043	D2WT011E10	DIODE,SILICON	11E1-EIC
⚠D405	AE004792	DCBFMQ3GU0	DIODE	FMQ-3GULF027-102
D406	BZ410103	D2WXGP10J0	DIODE,RECTIFIER	RGP10J-EIC
⚠D408	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D409	BZ410094	D97U01501B	DIODE,ZENER	MTZJ15B T-77
D410	BZ410043	D2WT011E10	DIODE,SILICON	11E1-EIC
D411	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
⚠D412	AD300731	D2WXN49370	DIODE,SILICON	1N4937
D413	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D414	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
⚠D415	BZ410063	D2WTAU02A0	DIODE,SILICON	AU02A-EIC
D418	BZ410037	D97U03301B	DIODE,ZENER	MTZJ33B T-77
D421	BZ410043	D2WT011E10	DIODE,SILICON	11E1-EIC
D423	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D424	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D601	AE006394	D28T0ERB60	DIODE,RECTIFIER	10ERB60-TA1B2
D604	AE004359	D97U03901B	DIODE,ZENER	MTZJ39B T-77
D606	AE004358	D97U02R01B	DIODE,ZENER	MTZJ2.0B T-77
D607	AD300069	D97U02701B	DIODE,ZENER	MTZJ27B T-77
D608	AE006394	D28T0ERB60	DIODE,RECTIFIER	10ERB60-TA1B2
D609	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D610	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D611	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D612	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D613	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
D614	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D616	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D618	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D619	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D621	BZ410034	D97U01301B	DIODE,ZENER	MTZJ13B T-77
D622	AD300070	D97U01201B	DIODE,ZENER	MTZJ12B T-77
D704	BZ410022	D97U06R81B	DIODE,ZENER	MTZJ6.8B T-77
D705	BZ410084	D97U01101B	DIODE,ZENER	MTZJ11B T-77
D801	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D802	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D803	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D807	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D808	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D809	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D853	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D854	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D855	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		DIODES		
D856	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D1001	AD301638	0010E00330	INFRARED LED	LTE-3271T-012A-O
D1002	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D1006	BZ410012	D28TQS04N0	DIODE,SCHOTTKY	11EQS04N-TA1B2
D1701	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D1702	BZ410031	D6CE24110A	DIODE,VARISTA	ENE241D-10A-Q6
⚠D1703	AE006060	D28T0ERB20	DIODE,RECTIFIER	10ERB20-TA1B2
D1704	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D1706	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D1707	AE003872	DOU002720M	DIODE,VARISTA	DSS-272M-S00B
⚠D1708	AE004936	D6E027110A	DIODE,VARISTA	ENE271D-10A
⚠D1709	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D1710	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D1711	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D1712	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
D1713	BZ410114	D2WXGP10K0	DIODE,RECTIFIER	RGP10K-EIC
D1714	BZ410066	D97U06R21B	DIODE,ZENER	MTZJ6.2B T-77
D1715	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D1716	AE007354	D23A0010J0	DIODE,SCHOTTKY	SBR100-10J-CBC11
⚠D1717	AE005172	D27A85T400	DIODE,SCHOTTKY	RB085T-40
D1718	AE001064	D28F31DQ09	DIODE,SCHOTTKY	31DQ09-FC
D1719	AE006394	D28T0ERB60	DIODE,SCHOTTKY	10ERB60-TA1B2
D1720	BZ410043	D2WT011E10	DIODE,SCHOTTKY	11E1-EIC
D1721	AD300731	D2WXN49370	DIODE,SCHOTTKY	1N4937
D2101	AE004795	DE7RB5R62B	DIODE,SCHOTTKY	UDZS5.6B TE-17
D2102	AE004795	DE7RB5R62B	DIODE,SCHOTTKY	UDZS5.6B TE-17
D2103	AE004795	DE7RB5R62B	DIODE,SCHOTTKY	UDZS5.6B TE-17
D2202	BZ410022	D97U06R81B	DIODE,SCHOTTKY	MTZJ6.8B T-77
D2203	BZ410022	D97U06R81B	DIODE,SCHOTTKY	MTZJ6.8B T-77
D2204	BZ410077	D2WXSB1400	DIODE,SCHOTTKY	SB140-EIC
D2205	BZ410087	0021E2Q140	LED	LTL-1CHEE-002A
D2206	BZ410087	0021E2Q140	LED	LTL-1CHEE-002A
D2207	BZ410087	0021E2Q140	LED	LTL-1CHEE-002A
D2208	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D2602	AE004646	DE5RB2R21X	DIODE,ZENER	02DZ2.2-X(TH3ORION
D3002	BZ410084	D97U01101B	DIODE,ZENER	MTZJ11B T-77
D3003	BZ410066	D97U06R21B	DIODE,ZENER	MTZJ6.2B T-77
D3004	BZ410012	D28TQS04N0	DIODE,SCHOTTKY	11EQS04N-TA1B2
D3005	AE000330	D97U03R61B	DIODE,ZENER	MTZJ3.6B T-77
D3006	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D3007	AE003870	D97U04R31B	DIODE,ZENER	MTZJ4.3B T-77
D3009	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D3010	BZ410061	D97U01001B	DIODE,ZENER	MTZJ10B T-77
D3451	AE004643	D28R1QS040	DIODE	EC31QS04-TE12L
D3601	AE004937	D77R1A1R10	DIODE,VARISTA	AVRL161A1R1NT
D3602	AE004795	DE7RB5R62B	DIODE,ZENER	UDZS5.6B TE-17
D3603	AE004937	D77R1A1R10	DIODE,VARISTA	AVRL161A1R1NT
D3604	AE004793	DD7R60L400	DIODE,SCHOTTKY	RB160L-40-TE25
D3605	AE004793	DD7R60L400	DIODE,SCHOTTKY	RB160L-40-TE25
D3609	AE004794	DE7RB3R32B	DIODE,ZENER	UDZS3.3B TE-17
D3613	AE004794	DE7RB3R32B	DIODE,ZENER	UDZS3.3B TE-17
D4001	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
D4201	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D4202	BZ410021	D97U05R61B	DIODE,ZENER	MTZJ5.6B T-77
D6401	AD302208	D97U03R31B	DIODE,ZENER	MTZJ3.3B T-77
D6402	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D6403	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D6404	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D6405	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
D6406	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D6407	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D6408	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D6409	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D6410	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D6411	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
⚠D6412	BZ410062	D2WTRM11C0	DIODE,SILICON	RM11C-EIC
D6413	AD300671	D97U01801B	DIODE,ZENER	MTZJ18B T-77
D6414	AD300731	D2WXN49370	DIODE,SILICON	1N4937
D6415	AD300671	D97U01801B	DIODE,ZENER	MTZJ18B T-77
⚠D6416	AD300731	D2WXN49370	DIODE,SILICON	1N4937
D6417	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		DIODES		
⚠D6418	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
⚠D6419	BZ410010	D28T21DQN9	DIODE,SCHOTTKY	21DQ09N-TA2B1
D6420	BZ410023	D97U09R11B	DIODE,ZENER	MTZJ9.1B T-77
⚠D6421	AD301980	D2CF2016L0	DIODE,SILICON	FE201-6L49
D6422	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
⚠D6423	AE001064	D28F31DQ09	DIODE,SCHOTTKY	31DQ09-FC
D6425	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D6428	BZ410006	D1VT001330	DIODE,SILICON	1SS133T-77
D8111	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
D8112	BZ410086	DD7R0S3550	DIODE,SILICON	1SS355 TE-17
		ICS		
IC101	AE007142	S5U3010M01	MEMORY DATA	OEC7121A
IC102	79097849	I9UF032290	IC	PST3229NR
IC103	79097849	I9UF032290	IC	PST3229NR
IC199	AE007137	S5U3010E01	MEMORY DATA	AT24C256N-10SU-2.7
IC301	AD301983	I01FF58910	IC	AN5891SA-E1V
⚠IC351	AD302184	I0FSP7522N	IC	AN7522N
⚠IC401	BZ611117	I03TD80410	IC	LA78041
IC602	AE004361	I05DD13170	IC	TA1317ANG
IC603	AE004362	I05DE13600	IC	TA1360ANG
IC705	AE004800	I05FE13830	IC	TA1383FG
IC707	BZ611104	I0QF02533V	IC	NJM2533V(TE2)
IC1001	AE007135	I56F57122A	IC	OEC7122A
IC1002	AD301641	I9UF032310	IC	PST3231NR
IC1099	AE007138	S5U3010E02	MEMORY DATA	BR24L02F-WE2
IC1501	AE005607	I55FE0A920	IC	TC90A92AFG
⚠IC1701	AE006398	I2BT067530	IC	STR-W6753
⚠IC1702	AE002809	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
⚠IC1703	AD302211	I1KJ9A431A	IC	KIA431A-AT
⚠IC1704	BZ611015	I1KA97805A	IC	KIA7805API
⚠IC1705	AE003914	I1KA98R330	IC	KIA278R33PI
IC2101	AE005610	IFSK0883C0	IC	MST9883C-LF-110
IC2301	AE003581	I03F065650	IC	LA6565-TE-L-E
IC2601	AE006550	ICQK0TQCG0	IC	ZR36708TQCG
⚠IC3002	AD301929	I1KA78R090	IC	KIA278R09PI
⚠IC3006	AD301929	I1KA78R090	IC	KIA278R09PI
IC3451	AE006395	I0GF91ZPH0	IC	PQ070XZ01ZPH
IC3452	AE006395	I0GF91ZPH0	IC	PQ070XZ01ZPH
IC3601	AE004654	I1KF98D330	IC	KIA78D33F
IC3602	AE004654	I1KF98D330	IC	KIA78D33F
IC3604	AE001295	I0QJ045800	IC	NJM4580M(TE1)
IC3605	AE004805	I5PF099930	IC	SII9993CTG100
IC3606	AE007139	S5U3010E03	MEMORY DATA	BR24L02F-WE2
IC3607	AE004802	I1FF043340	IC	CS4334-KSZR
IC3608	AE007140	S5U3010E04	MEMORY DATA	BR24L32F-WE2
IC3611	AE006399	ICMF08RD20	IC	SST89E58RD2-40-C-TQJE
IC3612	AE003923	I5CF01G080	IC	SN74AHC1G08DCKR
IC3901	AE005611	IFTK023010	IC	FLI2301-LF-BD
IC3902	AE005609	IF6J032B26	IC	MT48LC2M32B2P-6(Y14W)
IC4001	AE006549	ICQK067780	IC	ZR36778HQCG
IC4002	AE005421	I57J0L02F0	IC	BR24L02F-WE2
⚠IC4003	AE006061	I07F9E00W0	IC	BA33E00WHFP-TR
IC4005	AE005215	IFLJ0632H7	IC	K4S641632H-UC75
IC4006	AE006548	I5CJ032570	IC	SN74CBT3257PWR
IC4007	AE007141	S5U3010F01	MEMORY DATA	SST39VF1601-70-4C-EKE
IC4010	AE006548	I5CJ032570	IC	SN74CBT3257PWR
IC4201	AE002728	I01F05853B	IC	AN15853B-E1
IC4202	AE004651	I0QF025840	IC	NJM2584AM(TE1)
IC4501	AE005890	I03F3206ME	IC	LA71206M-MPB-E
IC5501	AE004692	I03F670BM0	IC	LA72670BM-L-MPB-E
⚠IC6401	AD302211	I1KJ9A431A	IC	KIA431A-AT
⚠IC6402	AE002809	000220002W	PHOTO COUPLER	PS2561AL1-1-V(W)
IC8004	AE001295	I0QJ045800	IC	NJM4580M(TE1)
IC8102	AE003584	I17F017530	IC	PCM1753DBQR
		TRANSISTORS		
Q101	BZ510113	T27T030180	FET	2SK3018T106
Q102	BZ510113	T27T030180	FET	2SK3018T106
Q103	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q104	BZ510113	T27T030180	FET	2SK3018T106
Q105	BZ510113	T27T030180	FET	2SK3018T106
Q106	BZ510022	TNYJJ05001	COMPOUND TRANSISTOR	DTC114TKAT146

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		TRANSISTORS		
Q350	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q353	BZ510067	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q354	BZ510021	TNYJC05001	COMPOUND TRANSISTOR	DTC124EKAT146
⚠Q401	AE004385	TC5TC3328Y	TRANSISTOR,SILICON	2SC3328_Y(TPE6_F)
⚠Q402	AE004814	T250029200	FET	2SK2920(Q)
⚠Q403	AE004386	TCKF059040	TRANSISTOR,SILICON	2SC5904000LI
Q407	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q408	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q413	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q414	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q415	AE004817	TC3F046340	TRANSISTOR,SILICON	2SC4634
Q601	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q602	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q603	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q604	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q605	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q606	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q607	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q608	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q611	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q612	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q613	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q615	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q616	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q617	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q618	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q704	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q705	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q708	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q709	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q710	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
⚠Q801	AE004383	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
⚠Q802	AE004383	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
⚠Q803	AE004383	TC30040750	TRANSISTOR,SILICON	2SC4075D/E
Q804	BZ510073	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
⚠Q810	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q811	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q812	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q814	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q852	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q853	AE004818	TCUT0752GY	TRANSISTOR,SILICON	2SC752(G)TM_Y(TP2
Q854	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q855	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q856	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q857	BZ510073	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
Q858	AE004815	TA10021400	TRANSISTOR,SILICON	2SA2140
Q859	AE004816	TC10059930	TRANSISTOR,SILICON	2SC5993
Q860	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q1001	BZ410097	0000M00390	PHOTO TRANSISTOR	ST-304L
Q1002	BZ410097	0000M00390	PHOTO TRANSISTOR	ST-304L
Q1003	BZ410106	0002700680	PHOTO COUPLER	RPI-352C40N
Q1004	BZ510067	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q1006	BZ410106	0002700680	PHOTO COUPLER	RPI-352C40N
Q1008	BZ410107	0002700690	PHOTO COUPLER	RPI-303
Q1009	BZ410107	0002700690	PHOTO COUPLER	RPI-303
Q1010	BZ510067	TNAAC05002	COMPOUND TRANSISTOR	KRC103SRTK
Q1501	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q1502	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q1503	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q1504	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q1505	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q1701	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q1702	AD301934	TBA0013660	TRANSISTOR,SILICON	KTB1366(O,Y)
Q1703	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
Q1704	BZ510096	TNATB03005	COMPOUND TRANSISTOR	KRC102MAT
Q2201	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q2202	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q2203	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q2601	BZ510112	T67J1036K0	TRANSISTOR,SILICON	2SA1036KT146
Q2602	AE003592	T67J048TL0	TRANSISTOR,SILICON	2SA2048TL
Q2603	BZ510113	T27T030180	FET	2SK3018T106

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		TRANSISTORS		
Q2604	BZ510113	T27T030180	FET	2SK3018T106
Q2605	BZ510113	T27T030180	FET	2SK3018T106
Q3001	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
⚠Q3002	AD301780	TCA0043690	TRANSISTOR,SILICON	KTC4369(O,Y)
Q3003	BZ510057	TAAT01281Y	TRANSISTOR,SILICON	KTA1281_Y
Q3004	BZ510105	TCAT03209Y	TRANSISTOR,SILICON	KTC3209_Y-AT
Q3005	AD300611	TAAT01273Y	TRANSISTOR,SILICON	KTA1273_Y
Q3006	BZ510090	TPAAB05001	COMPOUND TRANSISTOR	KRA102SRTK
⚠Q3007	BZ510057	TAAT01281Y	TRANSISTOR,SILICON	KTA1281_Y
Q3008	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q3009	BZ510073	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
⚠Q3010	BZ510105	TCAT03209Y	TRANSISTOR,SILICON	KTC3209_Y-AT
Q3011	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q3012	BZ510071	TNAAB05003	COMPOUND TRANSISTOR	KRC102SRTK
Q3013	BZ510105	TCAT03209Y	TRANSISTOR,SILICON	KTC3209_Y-AT
Q3603	BZ510113	T27T030180	FET	2SK3018T106
Q3604	BZ510113	T27T030180	FET	2SK3018T106
Q3605	BZ510113	T27T030180	FET	2SK3018T106
Q3606	BZ510113	T27T030180	FET	2SK3018T106
Q3607	BZ510113	T27T030180	FET	2SK3018T106
Q3608	BZ510081	TPYJA05001	COMPOUND TRANSISTOR	DTA143EKAT146
Q3609	BZ510045	TNYJD05001	COMPOUND TRANSISTOR	DTC144EKAT146
Q3610	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q3611	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q3612	BZ510045	TNYJD05001	COMPOUND TRANSISTOR	DTC144EKAT146
Q3613	AE005873	T8RA030520	TRANSISTOR,SILICON	2SC3052-T1
Q3901	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3902	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3903	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3904	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3905	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q3906	AE005872	T6RA015300	TRANSISTOR,SILICON	2SA1530A-T1
Q4004	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q4201	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q4202	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q4203	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q4501	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q4502	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q4503	BZ510072	TPAAC05002	COMPOUND TRANSISTOR	KRA103SRTK
Q4504	BZ510070	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
Q4505	BZ510073	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
Q4506	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q4507	BZ510109	TCAA3875SY	TRANSISTOR,SILICON	KTC3875S_Y_RTK
Q4508	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q4509	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q4511	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q6401	BZ510073	TAATA12660	TRANSISTOR,SILICON	KTA1266-AT(Y,GR)
Q6402	BZ510069	TCATC31980	TRANSISTOR,SILICON	KTC3198-AT(Y,GR)
⚠Q6404	AE004387	TJXG15NK50	FET	STP15NK50ZFP
⚠Q6406	BZ510070	TCAT032034	TRANSISTOR,SILICON	KTC3203_Y-AT
⚠Q6408	BZ510004	TA3T016240	TRANSISTOR,SILICON	2SA1624-AA
Q8102	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q8103	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q8104	BZ510108	TAAA1504SY	TRANSISTOR,SILICON	KTA1504S_Y_RTK
Q9601	BZ510045	TNYJD05001	COMPOUND TRANSISTOR	DTC144EKAT146
Q9602	BZ510112	T67J1036K0	TRANSISTOR,SILICON	2SA1036KT146
		COILS &TRANSFORMERS		
L001	AE002347	021673220K	COIL	22 UH
L002	AD301990	021LA6330J	COIL	33 UH
L301	BZ310005	02167D101K	COIL	100 UH
L402	AE004749	022R00042A	COIL,LINEARITY	ELH5L7150N
L405	AE004330	02D3000064	COIL,CHOKE	ELC18B821LM
L406	AE004329	02D3000063	COIL,CHOKE	ELC18B151LK
L407	AE007112	02D3000073	COIL,CHOKE	ELC18B151EN
L408	AE004751	02D3000069	COIL,CHOKE	ELC18B103LM
L602	BZ310039	02167F220J	COIL	22 UH
L603	BZ310039	02167F220J	COIL	22 UH
L604	BZ310039	02167F220J	COIL	22 UH
L606	BZ310183	021LA6220J	COIL	22 UH
L607	BZ310039	02167F220J	COIL	22 UH
L608	BZ310118	02AHB9A972	CORE,FERRITE	W5T29X7.5X19

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		COILS &TRANSFORMERS		
L703	BZ310040	02167F470J	COIL	47 UH
L704	BZ310068	021LA66R8K	COIL	6.8 UH
L707	BZ310040	02167F470J	COIL	47 UH
L708	BZ310040	02167F470J	COIL	47 UH
L710	BZ310040	02167F470J	COIL	47 UH
L805	AD301781	021673560K	COIL	56 UH
L806	AD301781	021673560K	COIL	56 UH
L807	AD301781	021673560K	COIL	56 UH
L808	BZ310039	02167F220J	COIL	22 UH
L809	BZ310039	02167F220J	COIL	22 UH
L810	BZ310039	02167F220J	COIL	22 UH
L1001	BZ310079	021LA6101J	COIL	100 UH
L1002	AE007109	0216A62R2J	COIL	2.2 UH
L1003	AD301990	021LA6330J	COIL	33 UH
L1501	AE005592	0216S8330K	COIL	F 33 UH
L1502	AE005285	0216S8470K	COIL	F 47 UH
L1503	AE005591	0216S81R5M	COIL	F 1.5 UH
L1504	AE005285	0216S8470K	COIL	F 47 UH
L1505	AE005589	0216S8100K	COIL	F 10 UH
L1506	AE005589	0216S8100K	COIL	F 10 UH
L1507	AE005589	0216S8100K	COIL	F 10 UH
L1508	AE005590	0216S8150K	COIL	F 15 UH
L1509	AE005590	0216S8150K	COIL	F 15 UH
L1511	AE005590	0216S8150K	COIL	F 15 UH
L1512	AE005590	0216S8150K	COIL	F 15 UH
L1513	AE005058	0216S4220J	COIL	22 UH
L1514	AE005592	0216S8330K	COIL	F 33 UH
L1701	BZ310150	02167E220K	COIL	R7 22 UH
L1702	BZ310150	02167E220K	COIL	R7 22 UH
L1703	BZ310150	02167E220K	COIL	R7 22 UH
L1704	AD301539	02AHB0A0A4	CORE,FERRITE	W5T_20X10X10A
⚠L1705	AE007111	029X000129	COIL,LINE FILTER	SS30V-R300071
⚠L1706	AE007355	029X000124	COIL,LINE FILTER	SS35V-30082
⚠L1707	AE007110	028R300002	COIL,DEGAUSS	8R300002
L2101	AE005285	0216S8470K	COIL	F 47 UH
L2103	AE005285	0216S8470K	COIL	F 47 UH
L2104	AE005593	0216SD5R6J	COIL	5.6 UH
L2105	AE005593	0216SD5R6J	COIL	5.6 UH
L2106	AE005593	0216SD5R6J	COIL	5.6 UH
L3001	AD301785	02167E100K	COIL	R6-1 10 UH
L3003	BZ310118	02AHB9A972	CORE,FERRITE	W5T29X7.5X19
L3601	AE004752	02D6000068	COIL,CHOKE	ACM2012D-900-2P-T00
L3602	AE004752	02D6000068	COIL,CHOKE	ACM2012D-900-2P-T00
L3603	AE004752	02D6000068	COIL,CHOKE	ACM2012D-900-2P-T00
L3604	AE004752	02D6000068	COIL,CHOKE	ACM2012D-900-2P-T00
L3901	AE005285	0216S8470K	COIL	F 47 UH
L3903	AE005588	0216S4270J	COIL	27 UH
L3907	AE005285	0216S8470K	COIL	F 47 UH
L3909	AE005590	0216S8150K	COIL	F 15 UH
L4001	BZ310191	02167F2R2J	COIL	2.2 UH
L4002	BZ310118	02AHB9A972	CORE,FERRITE	W5T29X7.5X19
L4202	BZ310040	02167F470J	COIL	47 UH
L4203	BZ310040	02167F470J	COIL	47 UH
L4204	BZ310041	02167F101J	COIL	100 UH
L4501	BZ310039	02167F220J	COIL	22 UH
L4502	BZ310114	031626009R	COIL,BIAS OSC	1626009
L4503	BZ310041	02167F101J	COIL	100 UH
L4504	BZ310041	02167F101J	COIL	100 UH
L4505	BZ310040	02167F470J	COIL	47 UH
L4506	BZ310041	02167F101J	COIL	100 UH
L4507	BZ310171	032623004T	COIL,TRAP	STP-01064
L4509	BZ310039	02167F220J	COIL	22 UH
L5501	BZ310039	02167F220J	COIL	22 UH
L5502	BZ310183	021LA6220J	COIL	22 UH
L5503	BZ310039	02167F220J	COIL	22 UH
L5504	BZ310039	02167F220J	COIL	22 UH
L5505	BZ310039	02167F220J	COIL	22 UH
L8102	AE000828	02167F1R0K	COIL	1 UH
L8103	AE000828	02167F1R0K	COIL	1 UH
L8104	AE000828	02167F1R0K	COIL	1 UH
T401	AE004332	0450190181	TRANS,HORIZONTAL DRIVE	ETH19K208AZ

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		COILS &TRANSFORMERS		
⚠T402	AE004755	0486290014	TRANSFORMER,PULSE	86290014
⚠T1701	AE007113	0481291284	TRANSFORMER,SWITCHING	81291284
⚠T6401	AE006905	0481490034	TRANSFORMER,SWITCHING	81490034
		JACKS		
⚠J801	AE004762	066F130022	SOCKET,CATHODE RAY TUBE	ISDW03S-F
J2201	AE004761	063D700010	JACK	MDC-012V1-A_LF
J2202	AE004756	060J401104	RCA JACK	MTJ-032-03A-30FE
J2203	AE004758	060J401106	RCA JACK	MTJ-032-03A-32FE
J2204	AE004757	060J401105	RCA JACK	MTJ-032-03A-31FE
J3601	AE002950	060J421037	RCA JACK	MTJ-032-05A-32-FE
J3602	AE002951	060J421030	RCA JACK	MTJ-032-05A-31-FE
J4201	AE002759	060J431020	RCA JACK	MSP-213V2-432_NI_LF
J4202	AE002761	060J411032	RCA JACK	MSP-213V1-652_NI_LF
J4203	AE004334	063D700009	JACK	MDC-070V-A_LF
J4204	AE007114	060J431022	RCA JACK	MSP-213V2-732_NI_LF
		SWITCHES		
SW1001	BZ612016	0508S11001	SWITCH (LEAF)	LSA-1144EAU
SW2201	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2202	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2203	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2204	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2205	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2206	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2207	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2251	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2252	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2253	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2254	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2255	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2256	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2257	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
SW2258	BZ612010	0504101T34	SWITCH,TACT	EVQ21505R
		P.C.BOARD ASSEMBLIES		
PCB010	AE007124	A5U3010010	PCB ASS'Y	DME022A
PCB070	AE007125	A5U3010070	PCB ASS'Y	CME011A
PCB110	AE007126	A5U3010110	PCB ASS'Y	CCE007A
PCB130	AE007356	A5U3010130	PCB ASS'Y	DME028A
PCB240	AE007127	A5U3010240	PCB ASS'Y	CEE024A
PCB270	AE007128	A5U3010270	PCB ASS'Y	CEE028A
PCBD80	AE007129	A5U3010D80	PCB ASS'Y	CEE026A
PCBDI0	AE007130	A5U3010DI0	PCB ASS'Y	CEE025A
PCBDJ0	AE007131	A5U3010DJ0	PCB ASS'Y	CED011A
PCBDM0	AE007132	A5U3010DM0	PCB ASS'Y	DED022A
PCBDS0	AE007133	A5U3010DS0	PCB ASS'Y	CED020A
		MISCELLANEOUS		
B403	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B404	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B405	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B851	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B852	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B853	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B1501	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B2102	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B2601	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B2602	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B2603	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B2604	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B2605	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B3001	BZ310121	024HT03553	CORE,BEADS	W5RH3.5X5X1.0
B3601	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3602	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3603	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3604	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3608	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3609	AE004602	024HC36001	CORE,BEADS	HCB2012K-600T25
B3610	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B3611	BZ310186	024HC31022	CORE,BEADS	FCM2012H-102T04
B4001	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4002	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4003	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4004	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.		Description
		MISCELLANEOUS		
B4005	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4006	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4007	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4008	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4009	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4010	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B4201	BZ310122	024HT03563	CORE,BEADS	W4BRH3.5X6X1.0X2
B4202	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B8103	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
B9601	AE005476	0246C51024	CORE,BEADS	MMZ1608R102CT
BL001	BZ310014	023C00022A	COIL BALUN	HPN-01
BT001	AE005640	141R004016	BATTERY,MANGAN	GR03X-SP2
BT002	AE005640	141R004016	BATTERY,MANGAN	GR03X-SP2
CD352	AE007119	06CU14A102	CORD,CONNECTOR	CU14A102
CD401	AE007357	06C3014501	CORD,CONNECTOR	C3014501
CD602	AE007143	WDL6074038	FLAT CABLE AWM2468 A	WG26 6C BLACK 740MM
CD603	AE007117	06C3227201	CORD,CONNECTOR	C3227201
CD803	AE005222	06C383037A	CORD,CONNECTOR	C383037A
CD808	BZ614385	WCL6838038	FLAT CABLE AWM2468 A	WG26 5C GRAY 380MM
CD851	AE004893	WBL6042038	FLAT CABLE AWM2468 A	WG26 4C BLACK 420MM
CD852	AD301043	06CU232001	CORD,CONNECTOR	CU232001
CP102	BZ614213	069S2A0629	CONNECTOR PCB SIDE	A2001WV2-10P
CP103	AE003632	069S2D0639	CONNECTOR PCB SIDE	A2001WR2-13P
CP303	BZ614405	069S140439	CONNECTOR PCB SIDE	A2502WR2-4P
CP401	AE004336	069S2G0629	CONNECTOR PCB SIDE	A2001WV2-16P
⚠CP404	AE006075	069X460109	CONNECTOR PCB SIDE	B06B-DVS-L (LF)
CP601	AE007118	06C32G4701	CORD,CONNECTOR	C32G4701
CP602	BZ614333	067U006049	WIRE HOLDER	B2013H02-6P
CP801	BZ614416	069S220629	CONNECTOR PCB SIDE	A2001WV2-2P
CP803	AD301996	069S330010	CONNECTOR PCB SIDE	A2361WV2-3P
CP804	BZ614058	069W010010	CONNECTOR PCB SIDE	005P-2100
CP852	BZ614350	069S230629	CONNECTOR PCB SIDE	A2001WV2-3P
CP853	BZ614349	067U003029	WIRE HOLDER	B2013H02-3P
⚠CD1701	AE006538	1209415910	CORD,AC BUSH	9415910
CD2251	AE000583	06CU230702	CORD,JUMPER	CU230702
CD3001	AE007358	06C32F5001	CORD,CONNECTOR	C32F5001
CD3002	AE007359	06C3015004	CORD,CONNECTOR	C3015004
CD3003	AE007360	06C3013301	CORD,CONNECTOR	C3013301
CD4001	AE006539	122H0O2601	CORD,JUMPER	2H0O2601
CD4002	AE006533	06C32B3305	CORD,CONNECTOR	C32B3305
CD4501	BZ614373	122F061502	CORD,JUMPER	2F061502
CD4503	AE007029	W9L6012042	FLAT CABLE AWM2468 A	WG26 2C BLACK 120MM
CD6402	AE007121	06CUU22401	CORD,CONNECTOR	CUU22401
CD8101	AE006754	122H0C1302	CORD,JUMPER	2H0C1302
⚠CP1701	BZ614176	069S320419	CONNECTOR PCB SIDE	A3963WV2-3PD
⚠CP1702	BZ614283	069S420110	CONNECTOR PCB SIDE	A1561WV2-2P
CP1704	BZ614016	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP1706	BZ614016	069W01001A	CONNECTOR PCB SIDE	003P-2100
⚠CP1707	AE000579	069S2F0629	CONNECTOR PCB SIDE	A2001WV2-15P
CP1708	BZ614016	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP1709	BZ614016	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP1710	BZ614016	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP1711	BZ614016	069W01001A	CONNECTOR PCB SIDE	003P-2100
CP2201	BZ614350	069S230629	CONNECTOR PCB SIDE	A2001WV2-3P
CP2601	AE003571	069GYOT119	CONNECTOR PCB SIDE	09-5000-024-001-001
CP2602	AE005934	069EV53030	CONNECTOR PCB SIDE	00_6232_005_006_800+
CP2603	AE005935	069EV63030	CONNECTOR PCB SIDE	00_6232_006_006_800+
CP3001	BZ614289	06972C0010	CONNECTOR PCB SIDE	TMC-J12P-B2
CP3601	AE004763	069HYJ3010	CONNECTOR PCB SIDE	DC1R019JDA
CP3602	AE004769	069J1K0048	CONNECTOR	IMSA-9130S-20L
CP3604	BZ614239	069S290639	CONNECTOR PCB SIDE	A2001WR2-9P
CP4002	AE001341	069RYOT109	CONNECTOR PCB SIDE	52975-2492
CP4201	AE007361	069J1K0078	CONNECTOR PCB SIDE	IMSA-9130B-20-PT1
CP4202	AE007362	069J1D0078	CONNECTOR PCB SIDE	IMSA-9130B-13-PT1
CP4203	AE007362	069J1D0078	CONNECTOR PCB SIDE	IMSA-9130B-13-PT1
CP4501	BZ614011	0697290620	CONNECTOR PCB SIDE	TOC-C09X-A1
CP4502	AE001239	069J760599	CONNECTOR PCB SIDE	IMSA-9604S-06C
CP4503	AD301649	067U002019	WIRE HOLDER	B2013H02-2P
CP7201	AE006384	069R2Y0720	CONNECTOR PCB SIDE	79107-7016
CP7202	AE007115	069J1D0028	CONNECTOR PCB SIDE	IMSA-9131S-13L
CP7203	AE007115	069J1D0028	CONNECTOR PCB SIDE	IMSA-9131S-13L

ELECTRICAL REPLACEMENT PARTS LIST

Location No.	TSB P/N	Reference No.	Description	
		MISCELLANEOUS		
CP8001	BZ614214	069S2B0629	CONNECTOR PCB SIDE	A2001WV2-11P
CP8002	AE004335	069J7C0599	CONNECTOR PCB SIDE	IMSA-9604S-12C
CP802B	BZ614366	069R260589	CONNECTOR PCB SIDE	52147-0610
CP808A	BZ614276	067U005049	WIRE HOLDER	B2013H02-5P
CP808B	BZ614276	067U005049	WIRE HOLDER	B2013H02-5P
CP8101	AE006053	069J7C0589	CONNECTOR PCB SIDE	IMSA-9604S-12F
CP851A	BZ614334	067U004029	WIRE HOLDER	B2013H02-4P
CP851B	BZ614334	067U004029	WIRE HOLDER	B2013H02-4P
CP9603	AE006530	069QN4201A	CONNECTOR PCB SIDE	CLE9042-0101F
CP9604	AE001341	069RYOT109	CONNECTOR PCB SIDE	52975-2492
CP3901B	AE005595	069R2Y0700	CONNECTOR PCB SIDE	87760-3416
EL0701	BZ614043	124116281A	EYE LET	XRY16X28BD
EL0702	BZ614044	124120301A	EYE LET	XRY20X30BD
EL1101	BZ614043	124116281A	EYE LET	XRY16X28BD
EL1102	BZ614044	124120301A	EYE LET	XRY20X30BD
EL2401	BZ614043	124116281A	EYE LET	XRY16X28BD
EL2402	BZ614044	124120301A	EYE LET	XRY20X30BD
⚠F1701	BZ614422	081PC6R305	FUSE	51MS063L
⚠F6401	AE004346	0835A07005	MICRO FUSE	20N_7000FSW
⚠FB401	AE004753	043730001F	TRANSFORMER,FLYBACK	3730001F
FH1701	AE002634	06710T0009	HOLDER,FUSE	EYF-52BCY
FH1702	AE002634	06710T0009	HOLDER,FUSE	EYF-52BCY
NR1501	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR1502	AE004680	110P4101M4	R,NETWORK	4D03WGJ0101T5E
NR2101	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2102	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2103	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2104	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2105	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2106	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR2107	AE005599	110P4220M4	R,NETWORK	4D03WGJ0220T5E
NR3901	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3902	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3903	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3904	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3905	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3906	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3907	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3908	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3909	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3910	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3911	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3912	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
NR3913	AE006386	110P4000M4	R,NETWORK	4D03WGJ0000T5E
OS2201	AD301949	0773071003	REMOTE RECEIVER	RPM7138-WH10
OS4201	AE000830	07AQ000009	OPTICAL DEVICE	OFTG038101
⚠RY1701	AE003621	0560V50118	RELAY	ALKS329
⚠RY1702	AD300114	0560V20115	RELAY	ALKS321
⚠SP351	AE007122	070W457007	SPEAKER	MSF-2D5D10W
⚠SP352	AE007122	070W457007	SPEAKER	MSF-2D5D10W
TM101	AE007123	076D0KH020	TRANSMITTER	ORT204N7404426-U
⚠TU001	AE005631	0163300016	RF UNIT	115-V-KA35AR
⚠TH1702	BZ410079	DF5EL3R0A0	DEGAUSS ELEMENT	ZPB45BL3R0A
⚠V801	AE004778	0981300501	CRT W/DY	W76MAG185X80
X101	BZ613006	100DA32R01	CRYSTAL	DT-26
X103	AE004780	100WT01611	CRYSTAL	HC-49/U-S
X603	AE004348	1002R01502	CERAMIC OSCILLATOR	CSBLA503KECZF30-B0
X701	AE004348	1002R01502	CERAMIC OSCILLATOR	CSBLA503KECZF30-B0
X702	AE004349	100CT3R536	CRYSTAL	HC-49/U
X1002	AE000107	100CT01207	CRYSTAL	HC-49/U-S
X1501	AE004628	100DT04201	CRYSTAL	SMD-49
X3601	AE004779	100CT01101	CRYSTAL	HC-49/U-S
X3901	AE005598	100DT01303	CRYSTAL	SMD-49
X4001	AD301803	100BT02701	CRYSTAL	HC-49U/S
X4501	BZ613017	100CT3R502	CRYSTAL	HC-49/U

ELECTRICAL REPLACEMENT PARTS LIST

RESISTOR

RC.....	CARBON RESISTOR

CAPACITORS

CC.....	CERAMIC CAPACITOR
CE.....	ALUMI ELECTROLYTIC CAPACITOR
CP.....	POLYESTER CAPACITOR
CPP.....	POLYPROPYLENE CAPACITOR
CPL.....	PLASTIC CAPACITOR
CMP.....	METAL POLYESTER CAPACITOR
CMPL.....	METAL PLASTIC CAPACITOR
CMPP.....	METAL POLYPROPYLENE CAPACITOR

TOSHIBA CORPORATION
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